IN THE UNITED STATES DISTRICT COURT
OF THE DISTRICT OF DELAWARE

LINEAR TECHNOLOGY CORPORATION	)	
	)	
Plaintiff,	)	C.A. No. 06-476-GMS
	)	
v.	)	
	)	**JURY TRIAL DEMANDED**
MONOLITHIC POWER SYSTEMS, INC.	)	
	)	
Defendant.	)	
	)	

MONOLITHIC POWER SYSTEMS, INC.'S ANSWERING CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Defendant Monolithic Power Systems, Inc. ("MPS") submits this answering brief in response to Linear Technology Corporation's ("Linear") Opening Claim Construction Brief ("LOB") regarding the disputed terms of U.S. Patent Nos. 5,481,178 ("the '178 patent") and 6,580,258 ("the '258 patent") (collectively, the "Linear Patents").

Linear's Opening Brief is fraught with contradictions. For example, in some instances, Linear insists that the Court adopt the constructions from the prior *Linear Technology Corporation v. Impala Linear Corp.* litigation ("the *Impala* litigation"), arguing that the *Impala* court's "claim constructions are properly informed by the intrinsic evidence." LOB at 6. Yet in other instances, Linear argues against the *Impala* court's constructions, maligning them as "somewhat ambiguous and contain[ing] technical inaccuracies." LOB at 37. Linear asks this Court to construe numerous terms – including "threshold fraction," "switching voltage regulator," "second means," and "third circuit" – differently than the *Impala* court did. Thus, despite Linear's lip service to the desirability of uniformity in the construction of claim terms, Linear actually is seeking to pick and choose those constructions that it wants and contradict those that it dislikes.

Similarly, on the one hand, Linear asserts that this Court should give "reasoned deference" to the decision of the *Impala* court that previously construed certain terms from the asserted claims, arguing that the Supreme Court has expressed a desire for uniformity in the construction of claim terms. LOB at 9. On the other hand, Linear asks this Court to disregard ITC Judge Harris's constructions of the disputed claim terms in the *AATI* investigation – even though the inevitable result would be the very uncertainty against which the Supreme Court has counseled. Linear provides no credible argument for not according "reasoned deference" to the ITC's determinations – it just does not like them. Thus, Linear alternatively advocates uniformity and inconsistency in claim constructions, depending upon which approach suits its immediate purpose – even though it was involved in both referenced lawsuits.

Linear's attacks on Judge Harris' opinion as somehow being uninformed are particularly misguided given that he is the only judicial officer who has presided over an actual trial concerning the Linear Patents. Judge Harris received extensive pre-trial and post-trial briefs from Linear, AATI, and the ITC staff, he heard testimony from Linear's fact witnesses as well as from Linear's and AATI's technical experts, and he closely questioned the witnesses. His detailed opinion reflects a careful and thoughtful review of the relevant evidence.

Apparently unable to find impartial evidence such as intrinsic evidence or a technical dictionary to support its proposed constructions, Linear has filed a conclusory 12-page declaration from its "expert witness," Robert Blauschild, to supplement its opening brief. Mr. Blauschild's declaration reveals that he has routinely testified for Linear in several different matters. The declaration is nothing more than a series of unsupported pronouncements over the signature of a highly paid witness, filed in an effort to patch over some of the defects in Linear's claim construction arguments and circumvent the Court's 40-page limit on the parties' briefs.[1] (It should be noted that in rejecting Linear's claim construction arguments, Judge Harris found the testimony of AATI's expert – Professor Wei of Harvard University – to be more credible and more consistent with the intrinsic evidence than the testimony of Linear's expert.)[2]

MPS has advocated the correct approach to claim construction. MPS's proposed constructions are supported by the words of the claims, the ordinary meaning of the claim terms,

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[1] The Blauschild declaration contains an assertion as to the level of skill of a person of ordinary skill in the art. Consistent with the rest of his declaration, there is no explanation or support for this pronouncement. Judge Harris found that a person of ordinary skill in the art "would have a bachelor's degree in electrical engineering or a similar field, and at least two years of work experience designing switching regulators." *In re Certain Voltage Regulators*, 337-TA-564, Initial Determination (J.A. Tab Q), at 9.

[2] Although MPS has agreed to the inclusion of the Blauschild declaration in the Joint Appendix, MPS believes that the conclusory declaration is facially deficient, that Linear's filing of and reliance upon it are improper, and that the Court should not consider it for claim construction purposes. MPS understands that the Court's practice is not to permit expert testimony at Markman hearings; Linear should not be permitted to circumvent that practice by filing a declaration from its expert.

the specification, and the prosecution history, as detailed in MPS's Opening Brief and further below. MPS was not a party to either the *Impala* litigation or the *AATI* investigation. It is entitled to an independent and informed consideration of the evidence.

II. PROCEDURAL BACKGROUND

A. Linear Has Withdrawn Its Infringement Allegations Concerning The MP18551 Part; The Only Accused Part Is The MP1543

As set forth in MPS's Opening Brief ("MOB"), Linear served infringement claim charts for two MPS parts, the MP1543 and the MP18551. MOB at 1. Linear has now withdrawn its infringement contentions as to the MP18551. Accordingly, the only accused MPS part is the MP1543.

B. The Settlement Agreement Does Not Bear On Claim Construction And It Does Not Bar MPS From Challenging Validity And Enforceability

Linear asserts that it filed this lawsuit to enforce a Settlement Agreement that terminated International Trade Commission Investigation No. 337-TA-521 brought by Linear against MPS ("the *MPS* investigation"). LOB at 4. Linear further asserts that MPS agreed that it would not assert a defense of invalidity or otherwise challenge the Linear Patents. *Id.* Both statements are inaccurate, as detailed in MPS's Answer (D.I. 9), MPS's Opposition to Linear's Motion to Strike Defenses of Invalidity and Unenforceability (D.I. 11), MPS's First Amended Answer (D.I. 36), and MPS's Motion for Leave to File Amended Answer (*Id.*). The Settlement Agreement has no bearing on this case and it does not prevent MPS from challenging the validity and enforceability of the Linear Patents. In any event, the Settlement Agreement has no relevance to the Court's claim constructions.

C. Prior Litigation Against Other Parties

Linear has asserted the Linear Patents against other parties. Accordingly, one district court and the ITC have construed limitations in certain of the asserted claims. Specifically, Judge Fern Smith issued claim constructions in the *Impala* litigation. The Federal Circuit then partially modified a subset of those claim constructions on appeal, which constructions are not

disputed in this case. *See Linear Technology Corp. v. Impala Linear*, 379 F.3d 1311 (Fed. Cir. 2004). In addition, Judge Sidney Harris construed various disputed claim terms in the *AATI* investigation. Unlike Linear, MPS was not a party in either litigation.

In its Opening Brief, Linear takes inconsistent positions concerning which of these constructions are due deference. Even though MPS was not a party to the *Impala* litigation, Linear contends that certain constructions from that case should be binding "because these claim constructions are properly informed by the intrinsic evidence" (LOB at 6) – ***except, of course, those constructions which are not helpful to Linear***. Linear wants to ignore those. At the same time, Linear urges this Court to disregard the constructions from the *AATI* investigation in wholesale fashion. *Id.*

To the extent that Linear is asserting that the *Impala* constructions must be adopted by this Court, it clearly is wrong. The cases cited by Linear make clear that while courts should strive for uniformity in claim construction, prior constructions are by no means preclusive and an independent analysis is necessary:

- "Thus, the decisions from Precor's previous action will be considered important to this inquiry, but by ***no means dispositive***." *Precor Inc. v. Fitness Quest, Inc.*, Case No. C05-0993L, 2006 U.S. Dist. LEXIS 63244, at *4 (W.D. Wash. 2006) (Ex. A) (emphasis added).

- "[T]he Court accepts the premise that a uniform treatment of claim construction is desirable, but ***rejects Intel's suggestion that this Court is bound in any way to accept the claim construction by Judge Illston***. This Court will take into account Judge Illston's claim construction as a thoughtful and thorough analysis of the parties' arguments involving the same patent and the same claim-but, ***in the end, will render its own independent claim construction***." *Maurice Mitchel Innovations v. Intel Corp.*, Case No. 2:04-CV-450, 2006 U.S. Dist. LEXIS 41453, at *12-13 (E.D. Tex. 2006) (Ex. B) (emphasis added).

- "Taking into account all of the above, the Court concludes that it will take into consideration Judge Ward's claim construction order as, per *Markman*, uniformity in claim construction is important. However, because Judge Ward's order is outside of this jurisdiction, ***this Court has discretion in determining the degree of deference accorded his order***. The Court concludes that order such as Judge Ward's is entitled to 'reasoned deference,' with such deference turning on the persuasiveness of the order; 'in the end, [however, the Court] ***will render its own***

> ***independent claim construction***.'" *Visto Corp. v. Sproquit Techs., Inc.*, 445 F. Supp. 2d 1104, 1108 (N.D. Cal 2006) (emphasis added).

Since MPS was not a participant in the previous cases, it would be fundamentally improper and unfair to accept the constructions of another court whose decision does not reflect MPS's participation. Linear knows this – it advocated and prevailed on this precise argument. *Texas Instruments, Inc. v. Linear Tech. Corp.*, 182 F. Supp. 2d 580, 586 (E.D. Tex. 2002) ("In all of the authority cited by the parties, there is not a single case where independent defendants were collaterally estopped from conducting a new claim construction. To a case, those district courts which have addressed the issue have concluded that ***defendants in a later proceeding involving previously construed patents should have the opportunity to brief and argue the issue of claim construction, notwithstanding any policy in favor of judicial uniformity***.") (emphasis added). *See also Third Wave Techs., Inc. v. Stratagene Corp.*, 381 F. Supp. 2d 891, 914 (W.D. Wis. 2005) ("[A] second alleged infringer is not bound by prior claim construction unless it had a full and fair opportunity to litigate the construction in the first infringement action."); *Precor, Inc.*, 2006 U.S. Dist. LEXIS 63244, at *4 ("In addition to lacking preclusive effect, however, the prior case also construed different terms, or the same terms in different contexts. Moreover, Fitness Quest is a ***new litigant and likely to have different arguments***.") (emphasis added).

Conversely, it is appropriate to bind Linear to certain constructions in the *Impala* litigation where Linear advocated prior constructions that it is now trying to contradict: "[T]he court indicated that it was appropriate to rely on the claim construction ruling because the defendant in the case at bar had called that claim construction ruling well reasoned and correct and even sought to have it adopted in litigation before the U.S. International Trade Commission." *Visto Corp.*, 455 F. Supp. 2d, at 1108; citing *Atmel Corp. v. Silicon Storage Tech., Inc.*, No. C 96-0089 SC, 2001 U.S. Dist. LEXIS 25641 at * 22 (N.D. Cal. June 20, 2001) (Ex. C) .

In sharp contrast to its statements concerning the deference owed Judge Smith, Linear contends that the Court should give no deference to Judge Harris' prior construction of the

asserted claims in the *AATI* investigation. Linear fails to articulate a credible distinction between deferring to a prior district court ruling and deferring to an ITC ruling. The case on which Linear relies, *Bio-Technology General Corp. v. Genentech, Inc.*, 80 F.3d 1553 (Fed. Cir. 1996), merely states that an ITC ruling will not be given preclusive effect in a subsequent district court action because the ITC cannot, by statute, award damages. This is not a basis for distinguishing between Judge Harris and Judge Smith, since this Court is not to give preclusive effect to prior district court constructions either.

The claim constructions resulting from an ITC investigation should be given the same reasoned deference given to district court claim constructions. "The district court can attribute whatever persuasive value to the prior ITC decision that it considers justified." *Texas Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1569 (Fed. Cir. 1996); *see also Eaton Corp. v. ZF Meritor LLC*, No. 03-74844, 2007 WL 1577843, * 2 (E.D. Mich Feb. 22, 2007) ("The ITC's claim construction set out at ¶¶ 12 and 13 of the Special Master Report dated 8/14/06 has been adopted by the Court.") (Ex. D). As the District Court for the Northern District of Ohio explained:

> As part of its investigation, the ITC will make rulings concerning claim construction, invalidity and relevant prior art. This Court recognizes that it is not bound by the rulings made by the ITC. As in *Alloc* [*Inc. v. Unilin Decor N.V.*, C.A. No. 03-23-GMS, 2003 WL 21640372 (D. Del. July 11, 2003) (Ex. E)], however, the Court finds that it would ***benefit tremendously*** from a narrowing of the complex issues in this case.

Flexsys Americas, LP v. Kumho Tire, U.S.A., Inc., No. 5:05CV156, 2005 WL 1126750, * 3 (N.D. Ohio, Apr. 29, 2005) (Ex. F) (emphasis added).

Linear provides no principled explanation as to why crediting some of Judge Smith's constructions, rejecting others, and ignoring Judge Harris's constructions entirely would further the Supreme Court's aim of "uniformity in the treatment of a given patent" and eliminating a "zone of uncertainty." *See, e.g., Markman v. Westview Inst.*, 517 U.S. 370, 390-91 (1996). MPS is entitled to have this Court conduct its own analysis of the meaning of the claims, informed by the evidence and the prior constructions from all prior litigation involving the Patents-in-Suit.

III. CLAIM CONSTRUCTIONS OF DISPUTED TERMS

A. "threshold" / "a threshold fraction of maximum rated output current for the regulator" / "selected sleep mode current level"

Claim Term	MPS Construction	Linear Construction
threshold	a fixed point, such as a current of voltage level, for a given effect, result or response	predetermined level or value at which some change in circuit operation takes place ("predetermined" means determined by design, and included levels or values that may be fixed or variable)
a threshold fraction of maximum rated output current for the regulator	a fixed number greater than zero that is selected as a proportionality of two numbers, the proportion being relative to maximum rated output current	a predetermined level or value at which some change in circuit operation takes place, wherein that level or value is a number greater than zero that represents the proportionality of two positive numbers, the proportion being relative to a rated maximum output current ("predetermined" means determined by design, and includes levels or values that may be fixed or variable.).
selected sleep mode current level	a fixed current level that represents a percentage of maximum rated output current below which the regulator is operated in a second mode of circuit operation	a current level below which the regulator enters into a second mode of operation

1. Linear's Proposed Constructions Render The Disputed Terms Superfluous And Meaningless

Linear's primary dispute with MPS's construction of the "threshold fraction" and "selected sleep mode current level" terms is the requirement of a fixed number or current level. Linear asserts that these claimed elements can be any value greater than zero and can fluctuate without limit. LOB at 30-35. Thus, Linear is arguing for any arbitrary value, rather than one that is fixed or selected by the user (or another circuit). In essence, Linear is asking the Court to

re-write the patent claims to replace the terms "a threshold fraction of maximum rated output current for the regulator" and "selected sleep mode current level" with "at some point." This, of course, is wholly improper.

The *Impala* court explicitly rejected this argument in the context of the disputed "threshold fraction" term. Indeed, the *Impala* court stated that it had "difficulty discerning how the threshold fraction can be anything other than a ***constant*** percentage" and specifically denied Linear's improper attempt to ignore this requirement. June 9, 1999, Claim Construction Order (J.A. Tab N) at 12-13. A so-called "threshold fraction" that fluctuates arbitrarily is not a "threshold fraction" at all. The same is true for the term a "selected sleep mode current level." This common-sense understanding is properly reflected in MPS's proposed constructions, which require the "threshold fraction" and the "selected sleep mode current level" to be fixed.

Linear's constructions render the "threshold" and "selected" terms superfluous and meaningless. MPS's constructions do not. Accordingly, MPS's constructions should be adopted. *See Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) ("A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so."); *Ethicon Endo-Surgery v. United States Surgical Corp.*, 93 F.3d 1572, 1582 (Fed. Cir. 1996) ("Ethicon's reliance on other claim language to overcome this fact invites us to read its 'during staple firing' limitation out of the claim. This we cannot do.").

2. MPS's Constructions Do Not Exclude Any Of The Disclosed Embodiments

Linear argues that MPS's constructions would exclude circuits that use a pulse width modulator (PWM) circuit, which results in variable off time, rather than a constant off time (COT) circuit. LOB at 32-34. Linear is wrong. MPS is not arguing that a voltage regulator which uses a PWM circuit cannot be covered by the patent claims. However, to infringe, any voltage regulator – whether it uses PWM, COT or some other circuit as the claimed "second circuit" – must satisfy all the limitations of an asserted claim, including the "threshold fraction" and "selected sleep mode current level" limitations of the claimed "third circuit." While it

undoubtedly is possible to design a PWM circuit that would satisfy the limitations of the "second circuit," such a PWM-based circuit design would have to meet all other claim limitations (including "threshold fraction" and "selected sleep mode current level") or it would not fall within the scope of the claim. These are separate and distinct claim limitations.

Linear makes an oblique argument that Figure 7 of the Linear Patents somehow undercuts MPS's constructions. Linear's argument appears to be that because the Figure 7 embodiment can operate in two modes – one in which the off time circuit is operating in a constant off time mode, the other in which the off time period is allowed to vary in response to low input voltage conditions – MPS's construction would improperly exclude the embodiment *See* LOB at 33-34. Linear's argument is specious.

As an initial matter, there is no tenet of claim construction that claims must be construed so as to cover each preferred embodiment. Moreover, in the Figure 7 embodiment, when the off time circuit is operating normally in a constant off time mode as the claimed "second circuit," the other disclosed components do operate to perform the function of the claimed "third circuit" by turning off both switching transistors at a fixed output current level, *i.e.,* the "threshold fraction" or "selected sleep mode current level." Indeed, the specific discussion in the patent concerning Figure 7 refers to a specific, fixed percentage of maximum output current: "When the load current exceeds, for example, ***approximately 20 percent of the maximum output current***, the loop operates in a continuous mode wherein comparator 74 does not override output 245A of one-shot generator 245." '178 patent (J.A. Tab A) at 12:14-17 (emphasis added). Thus, the Figure 7 embodiment, as disclosed, satisfies all of the claimed limitations when operated in the normal constant off time mode.

In contrast to the normal constant off time mode, the Figure 7 embodiment does not disclose any circuitry for performing the required "threshold fraction" or "selected sleep mode" function of the claimed "third circuit" when the off time circuit is operating in a variable off time mode. As a result, the Figure 7 embodiment, as disclosed, satisfies all of the claimed limitations

when operated in the normal constant off time mode (*id.*, at 4:53-60), but not in the variable off time mode during low input voltage conditions.

Stated differently, the claims containing the "threshold fraction" and "selected sleep mode current level" limitations do not necessarily exclude the use of variable off time circuitry as the "second circuit." Linear's apparent assertion that MPS's constructions would exclude a preferred embodiment from the claims is simply incorrect. Those claims, however, do require that the "threshold fraction" or "selected sleep mode current level" limitations be met for turning off both switching transistors. When the off time is allowed to vary, these limitations require additional circuitry for the "third circuit," which is not disclosed in the patent.

3. The Patent Specification Supports MPS's Constructions, Not Linear's

Linear makes the statement (without any explanation) that the term "threshold" is used in the Linear Patents in several instances to refer to variable levels or values, citing to several passages. LOB at 35. Once again, Linear is wrong. In fact, the term "threshold" is never used in the patent to refer to a value that is not fixed or selected by the user or other circuitry. For example, the specification states: "When I_L ramps up to a threshold level ***set*** by output 38A of transconductance amplifier 38, current comparator 39 trips and triggers the one-shot OFF pulse, initiating the 'OFF' cycle of switch 15." '178 patent (J.A. Tab A) at 4:36-39 (emphasis added). Here, the threshold level is a value that is "set" or fixed by the output of the transconductance amplifier. Likewise, the specification states, at 6:47-48: "**Constant current source I_1 *sets*** a minimum feedback current threshold for current comparator 39" (emphasis added).[3] Again, the minimum feedback current is a value that is "set" or fixed by the constant current source I_1.

Finally, Linear argues, without support, that the term "selected sleep mode current level" should not be construed consistently with the term "threshold fraction of maximum rated output current for the regulator" simply because these limitations use different words. LOB at 38-39.

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[3] Linear cites to '178 patent (J.A. Tab A) at 6:17-47, which does not include the term "threshold." Presumably Linear intended its citation to extent to column 6, line 48, which does.

Linear's argument is without merit. As explained in MPS's Opening Brief, Linear used these terms interchangeably to carry the same meaning throughout the prosecution history. MOB at 14-16. *See Tehrani v. Hamilton Med., Inc.*, 331 F.3d 1355, 1361 (Fed. Cir. 2003) ("[T]he intrinsic evidence indicates that the patentee meant for those two terms to be interchangeable and to carry the same meaning within the claims."). Linear does not acknowledge, much less address, the prosecution history because it has no credible argument for distinguishing between the two terms.

B. "first state of circuit operation" / "second state of circuit operation"

Claim term	MPS Construction	Linear Construction
first state of circuit operation	a state in which the output voltage is maintained during high load current conditions by switching the switching transistors in a complementary manner to provide power to the load	a state in which the switching transistors are both enabled for switching and are synchronously switched such that one transistor is ON and the other is OFF, with a varying duty cycle to maintain a regulated voltage at the output terminal.
second state of circuit operation	a state in which, as a result of low load current conditions, the output capacitor maintains the output voltage substantially at the regulated voltage, while the switching transistors are disabled	a state (excluding deadtime) during which both switching transistors are OFF and current is supplied to the load by the output capacitor.

1. Linear Conflates The Claimed States Of Circuit Operation With The Events That Occur During Those States

Linear's construction of the first and second states of circuit operation confuses the states of circuit operation with the events that occur during those states. For example, Linear attempts to equate the first state with alternating the switching transistors between on and off, and the second state with keeping both transistors off. Having conflated these events with the claimed states of circuit operation, Linear then finds an instance where one of the transistors is turned back on periodically during low output current conditions, and argues that this establishes that

the first state actually occurs during low output current conditions. LOB at 26-27. Linear's argument is circular, at odds with the claim language, and ignores the other claimed differences between the first and second states of circuit operation.

While the switching transistors can be turned on and off during the first state, and can be both turned off during the second state, the states themselves are not limited to or defined by those events alone. As explained in MPS's Opening Brief, the claims require two distinct states of circuit operation that are defined by a number of characteristics: (1) a first, high output current, state in which the output voltage is maintained at an essentially constant value by switching two transistors in complementary fashion through a first control signal generated by a duty cycle control circuit; and (2) a second, low output current, state in which the output voltage is maintained at a different average value by disabling these two transistors through a second control signal generated by a "sleep mode" circuit. MOB at 17-19. Thus, the claimed states of operation are fundamentally different in terms of the output current and voltage levels.

As set forth in MPS's Opening Brief, the specification clearly describes the first state as linked to high output current and the second state as linked to low output current. Linear reiterated this limitation repeatedly during prosecution of the patents in response to prior art rejections. Judge Harris specifically highlighted this link between the first and second states of circuit operation and the output current levels, finding that "the first state of operations is linked to high load currents, and the second state is linked to low load currents." *In re Certain Voltage Regulators*, 337-TA-564, Initial Determination (J.A. Tab Q), at 24-25. Accordingly, simply alternating the switching transistors on and off does not, by itself, meet the claimed requirements of the first state of circuit operation.

Instead, the first state of circuit operation is the state of operating the claimed regulator in which, at high output current levels, the output voltage is maintained at the regulated voltage level by continually alternating the switches between on and off, as described in the passage relied upon by Linear: "For example, ***at high output current levels during a first state of operation*** the switch continually alternates between an ON state and an OFF state to maintain the

output voltage V_{OUT} at the regulated voltage level V_{REG}." '178 patent (J.A. Tab A) at 8:4-8 (emphasis added). Thus, the specification clearly links the first state with high output current levels, rather than equating it with simply alternating the switching transistors between on and off. In fact, the claim language makes clear that the state itself is not defined by a particular event that occurs during that state: "a second circuit for generating a first control signal ***during a first state of circuit operation*** . . . ." '178 patent (J.A. Tab A) claim 1 (emphasis added). The first control signal then varies the duty cycle of the switching transistors to maintain the output terminal at the regulated voltage. *Id.*

Similarly, the second state of circuit operations is the state of operating the claimed regulator in which, at low output current levels, the output voltage is maintained "substantially at the regulated voltage" (which is a different average value than the regulated voltage) by turning off both switching transistors and periodically turning on one transistor to recharge the output capacitor:

> ***At low output current levels during a second state of circuit operation***, where circuit efficiency would otherwise be low, the output voltage V_{OUT} is able to be maintained substantially at the regulated voltage level V_{REG} by output capacitor C_{OUT} without continuously turning the switch ON and OFF. Thus, the control circuit automatically identifies such a condition and allows the regulator circuit to go into a "sleep mode" where a minimal number of circuit components are required to be ON.

'178 patent (J.A. Tab A) at 8:8-16 (emphasis added). Again, the specification clearly links the second state with low output current levels, rather than simply equating it with turning both transistors off.

The deficiencies in Linear's constructions are further highlighted by examining the claim language concerning the generation of the second control signal. Linear's constructions are at odds with that language. For example, claim 1 of the '178 patent specifies that the second control signal (which causes both transistors to be simultaneously OFF) is generated by the third circuit "***during a second state of circuit operation*** . . . ." '178 patent (J.A. Tab A) claim 1 (emphasis added). The fact that the second control signal for turning off both switching

transistors occurs ***during – and not before -- the "second state of circuit operation"*** necessarily means the regulator has entered the second state at a time when both transistors are not turned off. If Linear's constructions were correct, the second control signal would have to be generated during the first state of circuit operation and cause the regulator to enter the second state. Since Linear's proposed constructions are inconsistent with the claim language, Linear's proposed constructions must be wrong.

2. Linear's Arguments Are Contradicted By The Patent Specification

In making its argument, Linear relies primarily on a situation described in the specification where one of the switching transistors is turned on periodically to recharge the output capacitor during a period of low output current. Since Linear contends that the term "first state" refers to a situation in which the switching transistors are switching on and off, Linear argues that this must mean that the first state of circuit operation can occur during periods of low output current. LOB at 26-27. Not only is Linear's argument circular and, as shown above, at odds with the claim language, the passages in the specification cited by Linear actually contradict its argument.

For example, the specification explains that:

> As discussed above, control circuit 170 periodically wakes up during sleep mode to turn P-MOSFET 16 ON to recharge the output capacitor C_{OUT}. It will be apparent to those of ordinary skill in art that although N-MOSFET 15 is maintained OFF during such wake-up periods, this does not have to be the case. For example, while control circuit 170 is recharging output capacitor C_{OUT}, such recharging could be accomplished by alternately turning the switching transistors OFF so as to vary the duty cycle and thereby recharge the output capacitor C_{OUT}.

'178 patent (J.A. Tab A) at 8:61-9:3 (emphasis added). In other words, at low output current levels, one of the switching transistors can be turned back on periodically to recharge the output capacitor.

This event, however, occurs ***during the second state of circuit operation*** and thus cannot be part of the first state of circuit operation, as incorrectly alleged by Linear. Specifically, during the second state at low output current levels, the regulator maintains the output voltage

substantially at the regulated voltage (which is a different average value than the regulated voltage) by alternating between having two transistors off and briefly turning on one of the transistors to recharge the output capacitor. This is done to maintain high efficiencies at low output current as part of the claimed second state:

> Thus, ***during light loads,*** control circuit 70 is adapted to turn both MOSFET 16 and MOSFET 17 OFF when they are not needed to maintain the output voltage ***substantially at the regulated voltage level*** if the output capacitor C_{OUT} is capable of doing so. When the output voltage falls below the regulated voltage level ***in such a mode***, control circuit 70 is adapted to briefly turn switch 15 ON to recharge the output capacitor C_{OUT} back to a voltage level in excess of the regulated voltage. Therefore, ***V_{OUT} will oscillate between upper and lower thresholds*** separated by the comparator 74 hysteresis voltage multiplied by the ratio of $(R_1 + R_2)$ to R_2. The ratio at which the regulator "wakes up" to recharge output capacitor C_{OUT} will automatically adapt to the load current, maintaining high efficiencies even at low output current.

Id. at 7:6-21 (emphasis added).

Thus, the intrinsic record – both the claim language and the specification – directly contradicts Linear's arguments. What the intrinsic record does make clear is that the first state is linked to high output current and the second state is linked to low output current. In the second state, there may be times when one transistor is briefly turned on to recharge the output capacitor. The specification and the claims make clear that when that happens, the regulator is not re-entering the first state. Judge Harris correctly recognized this distinction in his claim construction ruling, and MPS respectfully requests that this Court do the same in this case.

C. "first control signal" / "second control signal" / "third circuit"

Claim term	MPS Construction	Linear Construction
first control signal	a signal generated by the second circuit and used to affect the operation of other circuitry, which signal is separate and distinct from the "second control signal."	a control signal generated by the second circuit and used to affect the operation of other circuitry.
second control signal	a signal generated by the third circuit and used to affect the operation of other circuitry, which signal is separate and distinct from the "first control signal."	a control signal generated by the third circuit and used to affect the operation of other circuitry.
third circuit	a circuit that is separate and distinct from both the "first circuit" and the "second circuit"	an assembly of electronic components forming a control circuit that is distinct from each of the first and second circuits in that not every electronic component of the circuits is the same

Two courts have already concluded that the third circuit is distinct from the first and second circuits. The *Impala* court held that "[t]he third circuit is distinct from each of the first and second circuits . . . ." June 9, 1999, Claim Construction Order (J.A. Tab N) at 9. Likewise, Judge Harris in the *AATI* investigation held that "[t]he requirement that the 'second' and 'third' circuit be distinct originates in the terms 'second circuit' and 'third circuit,' and the different operations ascribed to each in the claim language." *In re Certain Voltage Regulators*, 337-TA-564, Initial Determination (J.A. Tab Q), at 52. For the reasons explained in MPS's Opening Brief, MPS respectfully requests that this Court reach the same conclusion.

In its construction of "third circuit," Linear pays lip service to the *Impala* court's construction, but then advocates a different construction. Linear now seeks to depart from both courts' constructions and add the ambiguous language that the third circuit is only distinct in that "not every electronic component of the circuits is the same." Judge Harris rejected this same argument, finding that "in this investigation it has not been established that a 'third circuit' is created merely by adding a single component to the circuitry identified as the 'second circuit.'"

In re Certain Voltage Regulators, 337-TA-564, Initial Determination (J.A. Tab Q), at 53. Linear also argues that MPS's construction requiring that the third circuit be distinct is inconsistent with the preferred embodiments described in the specification. However, as explained in MPS's Opening Brief, the specification clearly describes the third circuit as separate and distinct. *Compare* '178 patent (J.A. Tab A) at 6:25-33 *with id.* at 6:55-60. Accordingly, the preferred embodiments support MPS's construction, not Linear's.

Linear similarly runs from both previous courts' constructions in its proposed constructions of first and second control signals, arguing that there should be no requirement that the two control signals be separate and distinct. In particular, the *Impala* court construed: (1) "control signal" as "a signal generated by a circuit and used to affect the operation of other circuitry," (2) "second circuit" for generating the "first control signal" as "a circuit that is distinct from each of the first and third circuit" and (3) the "third circuit" for generating the "second control signal" as "distinct from each of the first and second circuits." June 9, 1999, Claim Construction Order (J.A. Tab N), at 8-9. Thus, the first control signal is generated by the second circuit, and the second control signal (which is distinct from the first control signal) is generated by the third circuit (which is distinct from the second circuit). Judge Harris agreed, finding that "even if the [accused second control] signal performed the function of the second control signal, . . ., the [accused second control signal] could not satisfy the claim requirements because it is not distinct from the first control signal." *In re Certain Voltage Regulators*, 337-TA-564, Initial Determination (J.A. Tab Q), at 56.

As explained in MPS's Opening Brief, the plain language of the claims, as well as the specification, strongly support MPS's construction. There is no reasoned basis to depart from the constructions of two previous courts based on the intrinsic record and the plain meaning of the claim language.

D. "regulated voltage" / "substantially at the regulated voltage"

Claim Term	MPS Construction	Linear Construction
regulated voltage	a predetermined and essentially constant output voltage	A voltage having a controlled value
substantially at the regulated voltage	a voltage that has a different average value than the regulated voltage	A voltage having a controlled value, and allowing for, but not requiring, greater variation than the regulated voltage (*i.e.*, controlled value).

1. Regulated Voltage

Linear's proposed construction of "regulated voltage" ignores the specification's description of the term, the ordinary meaning as established by technical dictionaries, and the *Impala* court's construction.

The Federal Circuit's "cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005). In the Background of the Invention, the patents explain that "the ***purpose*** of a voltage regulator is to ***provide a predetermined and constant output voltage*** to a load from a poorly-specified and fluctuating input voltage source." '178 patent (J.A. Tab A) at 1:12-14 (emphasis added). Linear suggests that reliance on language in the Background of the Invention section is improper, LOB at 19, yet provides no support for such a contention.

Linear may be suggesting that the placement of this language in the Background of the Invention means that it is a discussion of the prior art, but that is belied by the very first line of the Background, which states that "[t]he ***present invention*** relates to a switching regulator circuit." *Id.* at 1:8-9. In this case, the patents explain that the "purpose" of a switching regulator is to provide a "predetermined and constant output voltage." *Id.* at 1:12-13. Moreover, the *Impala* court defined "switching voltage regulator" to mean "a device or circuit that . . . produces a predetermined and constant output voltage," noting that Linear agreed with this construction.

June 9, 1999, Claim Construction Order (J.A. Tab N) at 7. Since all of the patent claims contain the limitation "a switching voltage regulator," Linear cannot avoid this construction. The patents do not suggest, and the specification does not support a construction, that the voltage regulators of the claims are different in purpose than voltage regulators in general.

Linear argues that the specification does not describe a regulated voltage as predetermined and constant. This is incorrect, as shown by Linear's own citations. For example, the patent states: "Referring to FIG. 1, circuit 10 is used to provide a ***regulated DC output voltage V_{OUT} at terminal 12 (e.g., 5 volts)*** for driving load 14 which, for example, may be a portable or laptop computer or other battery-operated system." *Id.* at 3:53-58 (emphasis added). Here, the regulated voltage is a constant, predetermined voltage (*e.g.*, 5 volts) rather than the variable voltage urged by Linear. Similarly, the patent explains that "MOSFETS 16 and 17 are used to alternately supply current to output circuit 30 which includes inductor 32 (L_1) and output capacitor 34 (C_{OUT}). Output circuit 30 smooths [sic] the alternating supply of current so that load 12 is provided a regulated voltage V_{OUT}." *Id.* at 3:66-4:3. Here, the alternating (and thus variable) supply of current is "smooth[ed]" out to eliminate variability in the output voltage. Finally, '178 patent (J.A. Tab A) at 6:39-41, draws a distinction between the "regulated voltage V_{REG}" and an "output voltage V_{OUT} exceeding a predetermined voltage value in excess of the regulated voltage V_{REG}," showing that the regulated voltage is predetermined and essentially constant. *See also id.,* at 6:53-58 (same); 7:6-32 (distinguishing the regulated voltage from a voltage substantially at the regulated voltage).

Linear ignores the technical dictionary definitions set forth in MPS's Opening Brief establishing that a regulated voltage is constant or essentially constant (MOB at 25-26), instead relying upon unsupported extrinsic evidence in the form declaration of its so-called expert in its construction of "regulated voltage," who in turn merely parrots Linear's argument. The Federal Circuit has counseled that such "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court." *Phillips,* 415 F.3d at 1318.

Moreover, to the extent that Linear is arguing that MPS's construction permits no variation in the output voltage, Linear misrepresents MPS's construction. Rather, MPS's construction recognizes that it is not possible to achieve the ideal of an unvarying voltage supply, instead making clear that the regulated voltage is ***essentially*** constant.

2. Substantially at the Regulated Voltage

In attacking MPS's construction of "substantially at the regulated voltage," Linear makes four arguments: (1) MPS's construction is different from the Federal Circuit's construction of "substantially" in different cases that involve different and unrelated patents; (2) MPS's construction is different from the *Impala* court's construction; (3) MPS's construction limits the claims to embodiments that include a hysteretic comparator (it does not); and (4) claim differentiation should apply because a dependent claim recites a hysteretic comparator. None of these arguments has merit.

a. Linear's Arguments Are Not Grounded In Context

First, Linear argues that the Federal Circuit has construed the word "substantially" in other contexts, and those constructions should bind this Court. This, of course, is flatly against basic claim construction principles. In particular, although the word "substantially" is not unfamiliar in general in the English language, the term should be construed in the context of the patent in which it appears. "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips,* 415 F.3d at 1313. The Court is not bound by the Federal Circuit's construction of the term "substantially" in unrelated patents, and should resist Linear's suggestion to ignore the patents at issue in this case. In fact, in each of the cases cited by Linear, the Federal Circuit analyzed the particular patents and intrinsic evidence at issue and did not merely accept a prior construction from an unrelated case.

An analysis of the evidence pertinent to ***the patents at issue in this case*** supports MPS's construction. As Judge Harris explained:

> When one examines the entire claim language and the specification to determine the meaning of this term in its full and proper context, one discovers that the patent does not employ the term substantially merely to indicate a certain tolerance or leeway. The word substantially is used to indicate that the voltage should not be exactly the same, and that the difference between the voltages is important for operation of the claimed invention.

In re Certain Voltage Regulators, 337-TA-564, Initial Determination (J.A. Tab Q), at 23.

Next, Linear argues that the Court should adopt a construction that is based on (but different from) the *Impala* court's construction. At the same time, Linear urges the Court to ignore Judge Harris' construction of this term. LOB at 20-23. As explained above, neither of these prior constructions is binding on this Court, but both should be given due consideration. For the reasons set forth in MPS's Opening Brief, Judge Harris' construction of this term is more consistent with the language of the claims and the description in the specification. "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). Accordingly, Judge Harris's reasoning is the more persuasive of the two decisions.

b. MPS's Construction Does Not Require A Hysteretic Comparator

Linear's last two arguments are directed at the same issue: Linear incorrectly asserts that MPS's construction requires a hysteretic comparator. Linear argues that this is problematic because it reads in a preferred embodiment and violates the doctrine of claim differentiation because a hysteretic comparator is called out in a dependent claim. LOB at 22-24. Linear once again misstates MPS's construction and the disclosure in the specification.

The invention differentiates between the regulated output voltage maintained during the first state of circuit operation and the different average output voltage maintained during the second state of circuit operation, because that distinction is necessary to keep the claimed

circuitry from being in both states at the same time. As explained in MPS's Opening Brief, the specification describes the offset voltage V_{OS} as necessary to keep the sleep mode circuitry from operating during the first state of circuit operation: "Offset V_{OS} 76, which preferably is built into amplifier 38, level-shifts feedback voltage V_{FB} slightly below reference voltage V_{REF}, thus keeping the output of hysteretic comparator 74 high during high current conditions." '178 patent (J.A. Tab A) at 6:21-25.

The hysteretic comparator described in the specification has a different purpose than offset V_{OS} 76. Whereas the offset keeps the sleep mode circuitry from operating during the first state of circuit operation, the hysteretic comparator ensures that the sleep mode circuitry does not toggle off and on unnecessarily. In other words, some tolerance, or hysteresis, is built in to keep the sleep mode circuitry on long enough to be effective. The specification explains:

> Hysteretic comparator 74 monitors the feedback voltage V_{FB} and when V_{OUT} falls such that V_{FB} has decreased by the amount of the hysteresis in comparator 74, driver circuit 20 is taken out of sleep mode (where MOSFETS 16 and 17 are both driven OFF) so that a new ON cycle is initiated to supply current to load 14.

Id. at 6:64-7:2.

Linear also argues that one could set the "upper and lower thresholds[4] of the hysteretic comparator" so that the average output voltage in the second state is fortuitously the same as the regulated voltage. LOB at 23-24. This argument, however, finds no support in the specification. Instead, since the different feedback values are compared against the reference voltage during the two respective states of circuit operation, the average values of the output voltage will be different in each of those states. Judge Harris made exactly this finding in the *AATI* investigation:

> [T]he phrase "substantially at the regulated voltage" requires operation at a different voltage in the first and second states, and one of ordinary skill would understand that to encompass average voltages. As explained previously, ***all of the disclosed embodiments operate at a different average voltage in the first and***

[4] It is noteworthy that here Linear itself uses the term "threshold" to mean a fixed number.

> ***second states***. Further, ***the disclosed embodiments would not operate without this difference in average voltage***.

In re Certain Voltage Regulators, 337-TA-564, Initial Determination (J.A. Tab Q), at 59 (emphasis added).

This difference in average values of the output voltage can be implemented using a wide range of circuits (*e.g.,* offsets as disclosed in the patent) and does not require a hysteretic comparator. Because MPS's construction does not require a hysteretic comparator, Linear's argument that claim differentiation should apply is moot. There is another reason why the doctrine of claim differentiation is inapplicable in any event: dependent claim 5 of the '178 patent adds an additional claim limitation besides the "voltage comparator having hysteresis" limitation. In particular, claim 5 also adds the limitation that "the first feedback signal is a voltage feedback signal." Thus, claim 5 is differentiated from claim 4 regardless of whether a hysteretic comparator is required by claim 4. *See Liebel-Flarsheim Co. v. Medrad, Inc.,* 358 F.3d 898, 910 (Fed. Cir. 2004) (holding that the presumption of claim differentiation applied because "[a] comparison of claims 10 and 14 makes clear that ***the only significant distinction*** between the two is that claim 14 requires the use of a pressure jacket.") (emphasis added).

E. "first means" / "second means" / "third means"

Claim term	MPS Construction	Linear Construction
a first means for generating a voltage feedback signal indicative of the voltage at the output	This is a means-plus-function element governed by § 112, ¶ 6. The structures disclosed in the specification that correspond to the recited function are the following and their equivalents: (i) the combination of resistors 36A and 36B; (ii) the combination of resistors R1 and R2 and operational amplifier 602; and	This is a means-plus-function limitation, and it is to be construed to cover the corresponding structure(s) and equivalents thereof. The corresponding structures described in the specification include a resistor divider, with or without an operational amplifier, or other conventional voltage feedback circuits.

Claim term	MPS Construction	Linear Construction
	(iii) voltage feedback circuit 220.	
a second means for generating a first control signal … to maintain the output terminal at the regulated voltage	This is a means plus function element governed by § 112, ¶ 6. The structures in the specification that correspond to the recited function are the following and their equivalents: (i) the combination of drive circuit 20, transconductance amplifier 38, offset voltage V_{OS} 76, reference circuit 37, current source I_1 72, current comparator 39, and constant off-time one shot circuit 25, which outputs the first control signal; (ii) combinations having a pulse-width modulator circuit that provides a pulse width modulated signal in response to a control signal, Patent col. 9:18-21; (iii) circuit 240 in Fig. 5.; (iv) the combination illustrated in Fig. 7 (resistors Rsense and R3, one-shot circuit 245, off time controller 250 and capacitor C_{CON}); (v) an "operational amplifier," Patent col. 10:15-16; and (vi) the circuitry described at col. 13, lines 36-46.	This is a means-plus-function limitation, and it is to be construed to cover the corresponding structure(s) and equivalents thereof. The corresponding structures described in the specification include: • As illustrated in Fig. 2, the combination of drive circuit 20, transconductance amplifier 38, offset voltage V_{os} 76, reference voltage 37, current comparator 39, a feedback current path I_{FB} between inductor L_1 32 and current comparator 39, and constant off-time one-shot circuit 25, which outputs the first control signal; • combinations having a pulse-width-modulator circuit or a variable-off-time one-shot circuit (*e.g.,* circuit 240 of Fig. 5 or the circuit described at 10:15-16); or • As illustrated in Fig. 7, the combination of resistors R_{SENSE} and R_3, V_{REF}, V_{OS}, current comparator 39, one-shot circuit 245, off-time controller 250, and capacitor C_{CON}.

Claim term	MPS Construction	Linear Construction
a third means for generating a second control signal ... the period of time having a duration which is a function of the current supplied to the load by the regulator	This is a means plus function element governed by § 112, ¶ 6. The structures in the specification that correspond to the recited functions are the following and their equivalents: (i) the combination of hysteretic comparator 74, the offset voltage 76, constant current source I_1 (72), logic gates 66, 68, and 69, and reference voltage 37, all as disclosed in Figure 2; and (ii) the circuitry disclosed in Figure 7 (72, 74, V_{OS}, 315, 316 and related sleep control logic).	This is a means-plus-function limitation, and it is to be construed to cover the corresponding structure(s) and equivalents thereof. The corresponding structures described in the specification include: • As illustrated in Fig. 2, hysteretic comparator 74, V_{REF}, current source I_1 72, and logic circuits 66, 68, and 69; • As illustrated in Fig. 7, combinations such as the circuitry including 72, 74, 315, 316, V_{REF}, and related sleep control logic; or • combinations such as those disclosed at 16:5-12.

Here again, despite Linear's assertions that the Court should adopt the *Impala* court's constructions, Linear asks this Court to adopt different constructions for the "means-plus-functions" claims than were adopted in the *Impala* litigation. In fact, Linear's attorneys in *this* case are proposing a different construction for the "third means" term than are Linear's attorneys in *Analog Devices, Inc. v. Linear Technology Corp.*, C.A. No. 06-346 (GMS). Specifically, in the *Analog Devices* litigation, Linear's attorneys have agreed that the third means must include the offset voltage V_{OS} 76. *See* First Amended Joint Claim Construction Charts for the Patents Being Asserted by Linear Technology Corp., filed on June 20, 2007 in the *Analog Devices* litigation, at Exhibit A, page 3. Thus, Linear is not even proposing uniform constructions in its cases pending before this Court.

Moreover, Linear's position is particularly unseemly since Linear asked for, and received, essentially the same constructions of the first, second, and third means in the *Impala*

litigation that MPS now proposes. This reveals Linear's true motivations – it will advocate whatever position it believes to be expedient at the moment, without regard to consistency. Here, Linear knows that the constructions it advocated in the *Impala* litigation will preclude an infringement finding, so it seeks to abandon them.

As explained above, it is appropriate for the Court to adopt another court's prior construction when the party now opposing that construction previously advocated in its favor. *Visto Corp.*, 455 F. Supp. 2d, at 1108; *cf. RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1262 (Fed. Cir. 2003) ("The doctrine of judicial estoppel is that where a party successfully urges a particular position in a legal proceeding, it is estopped from taking a contrary position in a subsequent proceeding where its interests have changed.").

Linear argues that the *Impala* court's constructions of these terms are "somewhat ambiguous" because they recite the list of structures with a conjunctive "and." This is a pretext, as Linear as Linear advocated similar constructions of these terms and did not find the *Impala* court's phrasing unclear enough to appeal any of these constructions. Indeed, the *Impala* court introduced its recitation of the structures with the language "the ***structures*** in the specification that correspond to the recited function ***are*** the following . . . ." June 9, 1999, Claim Construction Order (J.A. Tab N) at 22 (emphasis added).

Linear's real agenda is to remove the voltage offset V_{OS} from the third means and the current source I_1 from the second means even though Linear specifically asked the *Impala* court for those limitations. This is improper. The specification explains that voltage offset V_{OS} and current source I_1 are necessary to keep the first and second states of circuit operation separate by maintaining different average values for the output voltage, as discussed above. In particular, the specification explains that:

> Offset V_{OS} 76, which preferably is built into amplifier 38, level-shifts feedback voltage V_{FB} slightly below reference voltage V_{REF}, thus keeping the output of hysteretic comparator 74 high during high current conditions.

'178 patent (J.A. Tab A) at 6:21-25.

Likewise, the specification explains:

> Constant current source I_1 sets a minimum feedback current threshold for current comparator 39. This sets a minimum current required in inductor L1 during each ON cycle to trip comparator 39.

Id. at 6:47-50.

As explained above, because the offset voltage is necessary to maintain the claimed circuit in the proper state, the average output voltages during the respective states of circuit operation will be different (at the regulated voltage during the first state, and substantially at the regulated voltage during the second state). Excising the offset voltage from the *Impala* court's construction of the third means is yet another attempt by Linear to blur the distinction between the regulated voltage and substantially at the regulated voltage. Accordingly, the specification does not support Linear's modifications to the *Impala* court's constructions of these terms.

F. "switching voltage regulator"

MPS Construction	Linear Construction
a device or circuit that is capable of receiving a poorly specified and fluctuating input voltage and that provides a predetermined and essentially constant output voltage by controlling the opening and closing of a switch	A device or circuit that receives an input voltage and provides a predetermined and regulated output voltage by controlling the opening and closing of one or more switching transistors. (Predetermined means determined by design, and includes voltages that may be fixed or variable).

Linear's proposed construction of "switching voltage regulator" again ignores the Linear Patents' clear usage of that term. As noted above, in the Background of the Invention, the inventors make clear that "the ***present invention*** relates to a switching regulator circuit" and that "the ***purpose*** of a voltage regulator is to provide a predetermined and constant output voltage to a load from a poorly-specified and fluctuating input voltage source." '178 patent (J.A. Tab A) at 1:8-14 (emphasis added). Indeed, this is the primary purpose of a voltage regulator: to receive a fluctuating input voltage and convert it into a steady, essentially constant output voltage.

Here again, Linear is running from a construction in the *Impala* litigation, where the term "switching voltage regulator" was construed to mean ""a device or circuit that receives an input voltage and produces a predetermined and constant output voltage." The *Impala* court noted that Linear agreed with this construction. June 9, 1999, Claim Construction Order (J.A. Tab N) at 7. Apparently no longer concerned with consistency, Linear advocates a different construction.

Once again, Linear argues, without support, that reliance on language in the Background of the Invention section is improper, and that MPS seeks to import limitations from the preferred embodiment. Linear may again be suggesting that the placement of this language in the Background of the Invention means that it is a discussion of the prior art, but, again, the first line of the "Background" states that "[t]he present invention relates to a switching regulator circuit." *Id.* at 1:8-9. Here, the patents discuss voltage regulators in general, describing the characteristics common to ***all*** voltage regulators (indeed their very "purpose"), including those claimed in the patents and described in all embodiments. "Statements that describe the invention as a whole, rather than statements that describe only preferred embodiments, are more likely to support a limiting definition of a claim term." *C.R. Bard, Inc. v. U.S. Surgical Corp.,* 388 F.3d 858, 864 (Fed. Cir. 2004).

Linear also mischaracterizes MPS's construction, stating that it is "divorced from reality" for use of the word "constant," and that under MPS's construction, a voltage regulator would "only operate under fixed and immutable operating conditions that can never vary . . . ." In fact, as explained above, the patents themselves used the word "constant" in its definition of a voltage regulator, and MPS uses "constant" as it would be understood by one of ordinary skill in the art reading that patents' use of the word. As the patent further explains, "[t]he switching regulator employs inductive energy storage elements to convert the switched current pulses into a steady load current." '178 patent (J.A. Tab A) at 1:24-27. Thus, the output of a switching regulator is an essentially constant voltage, rather than the fluctuating input voltage it is designed to receive.

Finally, Linear does not respond to the multiple technical dictionary definitions cited by MPS in support of its proposed construction. This is because Linear has no response.

G. "a pair of synchronously switched switching transistors"

MPS Construction	Linear Construction
a pair of switching transistors are "synchronously switched" when they are "driven out of phase to supply current at a regulated voltage to a load." "driven out of phase" means that the two switching transistors do not turn "on" and "off" at the same time at all times.	two switching transistors are synchronously switched when they are driven out of phase (i.e., one is ON and the other is OFF, except for deadtime) to supply current at a regulated voltage to a load

The parties agree that a pair of transistors are synchronously switched when they are driven out of phase to supply current at a regulated voltage to a load. However, the parties dispute the meaning of "driven out of phase." MPS urges the Court to give this language its ordinary and customary meaning to one of ordinary skill in the art, *i.e.,* the two switching transistors do not turn on and off at the same time at all times. In contrast, Linear argues that the specification allegedly describes an embodiment of the invention where if one transistor is on, the other transistor is always off (except for a "dead time" between when one transistor turns off and the other turns on). In other words, Linear would limit "out of phase" to mean exactly "180 degrees out of phase." As noted in MPS's Opening Brief, there is no basis for doing so.

The specification, moreover, depicts several "preferred" embodiments where the switching transistors will not turn off and on exactly 180 degrees out of phase. In particular, in Figures 2, 4, 8 and 9, an AND logic gate (identified as element 66 in Figures 2, 4 and 9, and as element 472 in Figure 8) controls the lower switching transistor but not the other. Due to the inherent propagation delay through this additional logic gate, the signal controlling the upper transistor will arrive at that transistor before the complementary signal controlling the lower transistor. This delay necessarily will prevent the switching transistors from being exactly 180 degrees out of phase, with the precise difference being a function of the duration of the delay. Linear's overly restrictive construction would exclude these preferred embodiments, which Linear acknowledges usually results in an incorrect claim construction. *See Vitronics Corp. v. Conceptronic, Inc.,* 90 F.3d 1576, 1581 (Fed. Cir. 1996).

Finally, Linear's attempt to import a "dead time" exclusion into its construction is also improper. In the patents, "dead time" is only described in the context of an unrelated problem the named inventors perceived in the prior art:

> A still further ***disadvantage of prior art circuit*** 10 concerns the gate drives to P-MOSFET 16 and N-MOSFET 17. Delays are generally incorporated into drivers 26 and 27 to ensure that one power MOSFET turns OFF before the other turns ON. If there is insufficient deadtime between the conduction of the two MOSFETs (due to, for example, device, circuit processing, or temperature variations), current will be passed directly from input supply V_{IN} to ground.

'178 patent (J.A. Tab A) at 5:33-40 (emphasis added). The asserted claims are directed to what the inventors considered to be an efficiency problem with the prior art. These claims do not purport to address the "shoot-through" issue, and thus it is improper to read such a limitation into the asserted claims.

H. "coupled"

MPS Construction	Linear Construction
circuit elements are "coupled" when they are so arranged that energy can transfer electrically or magnetically from one to another	circuit elements are coupled when a current path exists between them

Linear's proposed construction of "coupled" is further evidence of its willingness to abandon basic rules of claim construction. When discussing the term "switching voltage regulator," Linear (incorrectly) accuses MPS of reading in limitations from the preferred embodiments. Yet in its construction of "coupled," Linear pulls an about-face and improperly urges the Court to limit this term to electrical coupling and exclude magnetic coupling. Linear's argument is without merit – there is no basis for reading a preferred embodiment into the patent claims.

In construing "switching voltage regulator," it is entirely appropriate to rely on an explicit definition of that term found in the specification. In contrast, the term "coupled" has a widely-understood meaning in the art, which is consistent with its use in the specification. There is

nothing in the patents to suggest an attempt to redefine or limit the scope of this term to something other than its ordinary meaning.

"In many cases that give rise to litigation . . . determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art." *Phillips,* 415 F.3d at 1314. That is the case here. As explained in MPS's Opening Brief, several technical dictionaries uniformly show that "coupled" has a well-understood meaning in the art that includes the ability to transfer energy magnetically, which is consistent with use of the term in the Linear Patents. The Federal Circuit has explained that technical dictionaries are helpful to understanding the meaning of technical terms when used, as here, in their ordinary and customary fashion:

> We have especially noted the help that technical dictionaries may provide to a court "to better understand the underlying technology" and the way in which one of skill in the art might use the claim terms. Because dictionaries, and especially technical dictionaries, endeavor to collect the accepted meanings of terms used in various fields of science and technology, those resources have been properly recognized as among the many tools that can assist the court in determining the meaning of particular terminology to those of skill in the art of the invention. Such evidence, we have held, may be considered if the court deems it helpful in determining "the true meaning of language used in the patent claims."

Phillips, 415 F.3d at 1318.

These definitions, and MPS's construction, are consistent with the specification, as those definitions encompass the transfer of energy electrically as well as magnetically.

Linear acknowledges that "magnetic coupling" is a form of coupling, but argues that magnetic coupling is used as a form of electrical isolation, and hence must somehow be written out of the claims. LOB at 14. This argument is without merit. It erroneously presumes that the patents exclude magnetic coupling and relies only on the unsubstantiated statement of Linear's expert. Once again, "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court." *Phillips,* 415 F.3d at 1318.

Finally, Linear asks the Court to narrow the construction of "coupled" to avoid the Ziermann prior art reference, stating that it is proper to narrow a construction to preserve the

validity of a patent. LOB at 14. This is a blatantly erroneous statement of the law. "The doctrine of construing claims to preserve their validity, a doctrine of limited utility in any event, . . . has no applicability here." *Phillips,* 415 F.3d at 1328. The Federal Circuit has rejected construing claims to preserve their validity unless the claim language is still ambiguous after applying all of the tools of claim construction:

> While we have acknowledged the maxim that claims should be construed to preserve their validity, we have not applied that principle broadly, and we have certainly not endorsed a regime in which validity analysis is a regular component of claim construction. Instead, we have limited the maxim to cases in which the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous.

Id. at 1327.

Here, there is no ambiguity when the available tools of claim construction are properly applied – "coupled" is used in accordance with its ordinary meaning. Therefore it is improper to artificially narrow this term, even if the result is invalidity. "Rather, because the proper construction of the claims is clear, the question[ ] of . . . validity [is a] separate issue[ ] that must be separately addressed . . . ." *Liebel-Flarsheim Co.* 358 F.3d at 911-12.

I. "load" / "output terminal"

Claim Term	MPS Construction	Linear Construction
load	a device, circuit or system that consumes electric power; not part of the regulator structure	a device, circuit or system coupled to the output terminal to which the regulator can supply current
output terminal	a specific point of the switching voltage regulator that is directly connected to the load	a point or node of the switching regulator to which the load is coupled

Linear argues that the term "load" should be construed to include devices that generate, rather than consume, electric power. This is flatly contradicted by the ordinary meaning of the term "load" in the context of electronic circuitry, as explained in MPS's Opening Brief. *See, e.g.,* the McGraw-Hill Dictionary of Electronics and Computer Terminology (1984) (J.A. Tab T)

(defining "load" to mean "a device that ***consumes*** electric power.") (emphasis added); Wiley Electrical and Electronics Engineering Dictionary (2004) (J.A. Tab U) (defining "load" as "2. [a]ny component, circuit, device . . . which ***consumes . . . or otherwise utilizes power***, especially electricity.") (emphasis added). "[T]he words of a claim are generally given their ordinary and customary meaning," *Phillips,* 415 F.3d at 1312, and there is no reason to deviate from this principle now. Specifically, the proper construction should be the ordinary meaning of the term "load," as "nothing in the written description common to the patents-in-suit uses the term . . . in a manner inconsistent with that ordinary meaning." *Purdue Pharma L.P. v. Endo Pharma., Inc.,* 438 F.3d 1123, 1136 (Fed. Cir. 2006).

Contrary to Linear's assertions, the specification never states that the load, rather than the regulator, generates electric power. Linear's arguments to the contrary are based on a misreading of the specification. Linear argues that the specification, in its description of reverse current prevention, describes a "load" as generating power. LOB at 16. In fact, the specification describes the diversion of electric power from the regulator away from the load, such that the electric power produced by and stored in the output capacitor of the regulator is rerouted to ground through a transistor, rather than supplied to the load. For example, Linear cites to the '178 patent, at column 5, lines 18-32, which explains that:

> A further disadvantage of prior art circuit 10 results from the constant ripple current in inductor L1. During t_{OFF}, current I_L in inductor L1 always ramps down by the same amount regardless of the output current of the regulator. At low output currents this can cause the current in inductor L1 to reverse polarity and, thus, pull power from the load. During the following ON cycle, this current again ramps positive such that the average inductor current equals the load current. Losses associated with this constant ripple current, along with switching losses due to the charging and discharging of switch 15's MOSFET gates, can produce large reductions in efficiency at low output currents. This will be especially the case if the current in inductor L1 reverses and power is pulled from the load to ground through N-MOSFET 17.

'178 patent (J.A. Tab A) at 5:18-32; *see also id.* at 14:1-10.

Linear focuses on the phrase "pulls power from the load," mischaracterizing it as meaning that the load generates power that it supplies backwards to the regulator. In fact, as the

context of that language shows, this language refers to power generated and stored in the output capacitor of the regulator that is "pull[ed] from" being supplied to the load. The discussion in the specification is focused on the efficiency of the regulator, and the specification explains that "[l]osses associated with this constant ripple current . . . can produce large reductions in efficiency at low output currents." *Id.* If the load were supplying the power, as Linear would have it, rather than the regulator, this reverse current condition would not be attributed by the patent to reductions in the regulator's efficiency.

Moreover, the specification states that "[d]uring the following ON cycle, this current again ramps positive such that the average inductor current equals the load current." '178 patent (J.A. Tab A) at 5:24-26. Thus, the load current is not the same as the instantaneous inductor current, which ramps up and down generating a "ripple." *Id.* at 4:53-60. In fact, the discussion in the specification is of the behavior of the circuit during "low output currents," *id.* at 5:22, ***not*** negative output currents. According to the specification, then, while very little current is being supplied to the load (still a positive number), the instantaneous inductor current can reverse momentarily, pulling power from the output capacitor of the regulator that would otherwise be supplied to the load. During the next ON cycle, the instantaneous inductor current "ramps positive such that the average inductor current equals the load current," which is always a positive current flowing into, rather than out of, the load. *Id.*

Finally, Linear argues that MPS's construction of "output terminal" as a specific point of the switching voltage regulator that is "directly connected" to the load is inconsistent with the intrinsic evidence and would introduce ambiguity as to what "directly connected" means. LOB at 15. Linear points to nothing in support of this assertion. In fact, the specification describes the output terminal as directly connected to the load: "Referring to FIG. 1, circuit 10 is used to provide a regulated DC output voltage V_{OUT} at terminal 12 (e.g., 5 volts) for driving load 14 . . . ." '178 patent (J.A. Tab A) at 3:53-55. As this passage explains, the output voltage is supplied to the load at terminal 12 – the output terminal – which is directly connected to the load. Moreover, MPS proposes the language "directly connected" to remedy the ambiguity,

inherent in Linear's construction, as to what the output terminal actually is, and avoid an absurd result, as explained in MPS's Opening Brief. MOB at 37. Accordingly, MPS's construction of "output terminal" finds greater support in the specification and will eliminate ambiguity going forward.

IV. CONCLUSION

For the reasons set forth above, MPS respectfully submits that the Court adopt its proposed constructions for the identified claim terms.

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Dated: June 26, 2007
803997 / 30611

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CERTIFICATE OF SERVICE

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EXHIBIT A

LEXSEE 2006 U.S. DIST. LEXIS 63244

Analysis
As of: Jun 26, 2007

PRECOR INCORPORATED, a Delaware corporation; and LARRY D. MILLER, an individual, Plaintiffs, v. FITNESS QUEST, INC., a Delaware corporation; and NEW BALANCE ATHLETIC SHOE, INC., a Massachusetts corporation, Defendants.

Case No. C05-0993L

UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF WASHINGTON

2006 U.S. Dist. LEXIS 63244

August 23, 2006, Decided
August 23, 2006, Filed

SUBSEQUENT HISTORY: Motion denied by *Precor Inc. v. Fitness Quest, Inc., 2007 U.S. Dist. LEXIS 2915 (W.D. Wash., Jan. 12, 2007)*

PRIOR HISTORY: *Precor Inc. v. Fitness Quest, Inc., 2006 U.S. Dist. LEXIS 37614 (W.D. Wash., Feb. 6, 2006)*

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiffs, a patent holder and his licensee, filed an action for patent infringement against defendant corporations. The matter was before the court for claim construction pursuant to Markman.

OVERVIEW: Plaintiffs alleged that three elliptical fitness trainers infringed on their patent. The claims at issue had previously been construed in the district by another court, but the court considered the decisions from plaintiffs' previous action against another alleged infringer as important, but not dispositive, to the instant inquiry. The court construed seven terms or phrases, six of which appeared in the description of an exercise device. In construing the six terms, the court adopted the exact words of certain phrases, rejected the parties' broad interpretations, added certain clarifying words, and interpreted the claim terms to preserve validity. Because a claim related to a coupling member did not include the phrase "means to" and then describe a function, the court rejected defendants' argument that the claim should be construed as a means-plus-function claim pursuant to *35 U.S.C.S. § 112* para. 6. As to the seventh phrase, the court found no guidance from the specification or extrinsic evidence, and it concluded that the words of the claim implied that "distal" simply meant "further away from."

OUTCOME: The court construed the claim terms in accordance with its order.

LexisNexis(R) Headnotes

Patent Law > Infringement Actions > Claim Interpretation > General Overview
Patent Law > Infringement Actions > Claim Interpretation > Aids
[HN1] On patent issues, the district court applies the law of the United States Court of Appeals for the Federal Circuit. The United States Court of Appeals for the Federal Circuit and the United States Supreme Court have set forth a two-step analysis to determine whether a device infringes a patent. First, the court determines as a matter of law the proper construction of the asserted patent claims. Second, the fact finder determines whether the accused devices infringe on those claims. In the first step, the court must construe the language of the patent claims as would a person of ordinary skill in the art at the time of the invention. The court may seek guidance from intrinsic evidence (the words used in the claims themselves, language in the specification, and the prosecution history) and extrinsic evidence (expert testimony, publications, treatises and dictionaries). Although extrinsic

evidence may be used if the court considers it helpful, it is generally considered less reliable.

Patent Law > Infringement Actions > Claim Interpretation > General Overview
Patent Law > Preclusion > General Overview
[HN2] The United States Court of Appeals for the Federal Circuit has emphasized the importance of uniformity of claim construction of a single patent. There are sensible policy reasons for a court to construe patent claims consistently with other courts that have undertaken the same endeavor. While a court's previous opinion does not have issue preclusive effect, to the extent the parties do not raise new arguments, the court will defer to its previous construction of the claims.

Patent Law > Infringement Actions > Claim Interpretation > General Overview
[HN3] Where patent claim terms are susceptible to an ordinary meaning, that is the meaning the court should adopt.

Patent Law > Infringement Actions > Claim Interpretation > General Overview
[HN4] The court must not read limitations into a patent claim simply because they might be suggested in the specifications or figures.

Patent Law > Claims & Specifications > Claim Language > General Overview
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN5] Pursuant to *35 U.S.C.S. § 112* para. 6, a means-plus-function claim is a claim that is expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. Unless a claim includes the phrase "means to" and then describes a function, the court typically will not construe the claim as invoking *35 U.S.C.S. § 112* para. 6.

Patent Law > Infringement Actions > Claim Interpretation > General Overview
[HN6] Regardless of a word's ordinary meaning, the court must defer to the definition contained in the patent where the inventor has clearly set forth a definition. The patentee acts as his own lexicographer.

Patent Law > Infringement Actions > Claim Interpretation > Aids
[HN7] The court should not employ the patent prosecution history to aid interpretation where there is more reliable and less ambiguous evidence of the claim's meaning.

Patent Law > Infringement Actions > Claim Interpretation > Construction Preferences
[HN8] Where a patent claim term is equally susceptible to multiple interpretations, the court must construe it so as to preserve its validity.

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JUDGES: Robert S. Lasnik, United States District Judge.

OPINION BY: Robert S. Lasnik

OPINION

CLAIM CONSTRUCTION

I. Introduction

Plaintiffs Precor Incorporated and Larry D. Miller (hereinafter "Precor") brought this action for patent infringement [*2] against defendants Fitness Quest Incor-

porated and New Balance Athletic Shoe, Incorporated (hereinafter "Fitness Quest"). Precor alleges that three of Fitness Quest's elliptical trainers infringe on *U.S. Patent No. 5,383,829* ("the *'829 patent*"), a patent held by Miller and licensed to Precor. The matter is before the Court now for claim construction pursuant to *Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996).*

II. Relevant Law

[HN1] On patent issues, this Court applies the law of the Federal Circuit. *In re Cambridge Biotech Corp., 186 F.3d 1356, 1368 (Fed. Cir. 1999).* The Federal Circuit and Supreme Court have set forth a two-step analysis to determine whether a device infringes a patent. *Markman, 517 U.S. at 384-91.* First, the Court determines as a matter of law the proper construction of the asserted patent claims. Id. Second, the fact finder determines whether the accused devices infringe on those claims. Id.

In this first step, the Court must construe the language of the patent claims as would "a person of ordinary skill in the art at the time of the invention." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., 381 F.3d 1111 (Fed. Cir. 2004).* [*3] The Court may seek guidance from intrinsic evidence (the words used in the claims themselves, language in the specification, and the prosecution history) and extrinsic evidence (expert testimony, publications, treatises and dictionaries). See *Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582-83 (Fed. Cir. 1996).* Although extrinsic evidence may be used if the Court considers it helpful, it is generally considered less reliable. *Phillips v. AWH Corp., 415 F.3d 1303, 1318 (Fed. Cir. 2005).*

The claims at issue here have already been construed in this district by another court. Precor, Inc. v. Life Fitness, No. 00-120Z (W.D. Wash. Dec. 20, 2002) (Zilly, J.). [HN2] The Federal Circuit has emphasized the importance of uniformity of claim construction of a single patent. *Markman, 517 U.S. at 390.* There are sensible policy reasons for a Court to construe patent claims consistently with other courts that have undertaken the same endeavor. See *Kx Indus., L.P. v. PUR Water Purification Prods., 108 F. Supp. 2d 380, 387 (D. Del. 2000)* ("While the court's previous opinion does not have issue preclusive effect against PUR in [*4] this case, to the extent the parties do not raise new arguments, the court will defer to its previous construction of the claims."). In addition to lacking preclusive effect, however, the prior case also construed different terms, or the same terms in different contexts. Moreover, Fitness Quest is a new litigant and likely to have different arguments. Finally, Fitness Quest notes that because that case settled, the constructions never were subjected to the analytic crucible attendant to appellate review. Thus, the decisions from Precor's previous action will be considered important to this inquiry, but by no means dispositive.

III. Claim Construction

Six of the seven following terms or phrases submitted for construction appear in the description of an exercise device in claim 7 and are incorporated by reference in asserted claims 17-23. The claim describing the basic exercise device is repeated here to provide context (disputed terms in italics):

> 7. An exercise device comprising:
>
> -a frame having a pivot axis defined thereon, said frame configured to be supported on a floor;
>
> *-a first and a second foot link, each having a foot engaging portion*;
>
> *-a* [*5] *first and second coupling member, each associated with a respective one of said foot links for pivotally coupling said foot link to said pivot axis at a predetermined distance therefrom* so that a first end of said foot link travels in an *arcuate path* about said axis;
>
> *-a guide supported by said frame and operative to engage said foot links* and to direct a second end of each foot link along a preselected, *reciprocating path of travel* as the first end of said foot link travels along said arcuate path; so that when said exercise device is in use, and when the second end of one of said foot links travels from a point at a rearward end of said reciprocating path, forward along said path, the heel portion of a user's foot associated therewith initially rises at a faster rate than the toe portion, and when the second end of said foot link travels rearward along said reciprocating path of travel from a forward end thereof, the heel portion of the user's foot initially lowers at a faster rate than the toe portion, and *so that the heel portion of said user's foot travels in a path which does not encompass said pivot axis.*

The seventh phrase submitted for construction [*6] is a separate claim describing a variation of the exercise device described in claim 7. The full context of that claim is set forth in its subsection below.

A. "a first and a second foot link, each having a foot engaging portion"

The Court adopts Precor's proposed construction of this term, which is the exact words that are used in the claim: "a first and a second foot link, each having a foot engaging portion." [HN3] Where the claim terms are susceptible to an ordinary meaning, that is the meaning the Court should adopt. *Phillips, 415 F.3d at 1312-13.* Fitness Quest does not suggest that someone of ordinary skill in the art would interpret the term any differently. *Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed. Cir. 1999).* Instead, Fitness Quest supports its construction of the phrase by arguing that the phrase "foot *supporting* link" that engages the "user's" foot is more accurate. This is because the "supporting" function is logically implied by the other claims, and suggested by the figures. Thus, including a few additional terms and re-organizing the phrase would simply make what is clear to someone of ordinary [*7] skill in the art also clear to the lay jury, as required by *Phillips, 415 F.3d at 1314.* Fitness Quest's proposed construction goes beyond this innocuous proposal by reading additional limitations onto this claim based on the specifications. [HN4] The Court must not read limitations into a claim simply because they might be suggested in the specifications or figures. *Comark Communs. v. Harris Corp., 156 F.3d 1182, 1186 (Fed. Cir. 1998).*

B. "a first and second coupling member, each associated with a respective one of said foot links for pivotally coupling said foot link to said pivot axis at a predetermined distance therefrom"

Precor argues that this Court should construe "coupling member" as the court did in the previous action, as a "coupling structural unit," and construe "a predetermined distance" as "a distance that is known or determined before the use of the claimed device." The Court should accord the remainder of the words their ordinary meaning. Fitness Quest argues that this claim should be construed as a mean-plus-function claim pursuant to *35 U.S.C. § 112* P 6, involving, as drawn in the specifications, [*8] "(a) a pair of bell cranks, each of which is connected to a component defining the pivot axis and pivotally connected to a first end of a corresponding foot link; (b) a double wheel flywheel supported for rotation about the pivot axis, each wheel being pivotally connected directly to the first end of a corresponding foot link; or (c) equivalent structures thereof." Alternatively, Fitness Quest argues that the claim should be construed as:

> A pair of members, each of which: (1) is directly connected to a component defining the pivot axis; (2) is directly connected to the first end of the foot link at a single connection point defining a common axis between the member and the foot link; (3) permits rotational movement of the foot link relative to the member about the common axis; and (4) maintains a fixed distance between the common axis and the pivot axis.

Fitness Quest proposes this construction if the Court does not conclude that the claim should be construed as means-plus-function.

[HN5] Pursuant to *§ 112* P 6, a means-plus-function claim is a claim that is "expressed as a means or step for performing a specified function without the recital of structure, material, [*9] or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." *35 U.S.C. § 112* P 6. Unless a claim includes the phrase "means to" and then describes a function, the Court typically will not construe the claim as invoking *§ 112* P 6. *Greenberg v. Ethicon Endo-Surgery, 91 F.3d 1580, 1584 (Fed. Cir. 1996)* ("the use of the term 'means' has come to be so closely associated with 'means-plus-function' claiming that it is fair to say that the use of the term 'means' (particularly as used in the phrase 'means for') generally invokes *section 112(6)* and that the use of a different formulation generally does not."). Fitness Quest does not rebut this presumption.

The Court agrees with the reasoning in Judge Zilly's construction and from a prior Federal Circuit opinion that the term "member" specifically describes 'a structural unit such as a . . . beam or tie, or a combination of these'" which connotes a definite structure to someone of ordinary skill in the art. *CCS Fitness v. Brunswick Corp., 288 F.3d 1359, 1367 (Fed. Cir. 2002).* [*10] The patent does not lose its definiteness by modifying "member" with the adjective "coupling." Rather, it specifically describes a range of devices that are structural units which couple.

The CCS Fitness opinion also counsels against Fitness Quest's alternative proposed construction, which limits the scope of the claims by requiring the coupling member to provide a direct connection between the foot links and the pivot axis. That opinion identifies a "member" as a specific term for a component that can attach different parts through a variety of structural arrangements. To the contrary, Fitness Quest's proposed construction seems like a way to limit the coupling member to bell cranks and fly wheels without specifically mentioning these types of components. The Court therefore rejects Fitness Quest's alternative proposed construction of coupling members.

The Court is not persuaded by Fitness Quest's argument from the Markman hearing that CCS Fitness and Judge Zilly's opinion relying thereon should be discounted because they are pre-Phillips decisions. First, Phillips only discounted the priority of extrinsic evidence in the scheme of claim construction, and not [*11] its validity. Second, CCS Fitness's definition of "member" has not been called into doubt by subsequent decisions and is therefore valid precedent. Finally, Fitness Quest fails to show, other than through conclusory assertions, that the term "member" does not denote a specific set of structures, as established in CCS Fitness. While the Court acknowledges Fitness Quest's argument that pre-Phillips claim construction principles are suspect, no persuasive competing theories have been offered in the instant action.

Fitness Quest's other citations are unavailing. In Mas-Hamilton Group v. LaGard, the Federal Circuit held that the claim term "lever moving element" lacked "a reasonably well understood meaning in the relevant lock art" that would "save it from application of *[§ 112*, P 6]." *156 F.3d 1206, 1214 (Fed. Cir. 1998)*. The court in that case observed that while "many devices take their names from the functions they perform," the patent holder failed to "direct[] this court to any evidence demonstrating that the district court erred in determining that the term. lacks a reasonably well understood meaning in the relevant lock art." Id. This opinion [*12] does not dictate the result in the instant case because "coupling" is easily understood to provide more structural information than "lever moving." [1] The disputed claim terms in the remainder of Fitness Quest's cases are equally distinguishable. *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 422 F. Supp. 2d 446 (D.Del. 2006)* ("soft start circuit," a "soft start" could be accomplished in numerous ways); *Aspex Eyewear, Inc. v. Altair Eyewear, Inc., 386 F. Supp. 2d 526 (S.D.N.Y. 2005)* ("retaining mechanisms for supporting," "supporting" provides inadequate structural guidance for an object as vague as a "mechanism"); *Verizon Cal. Inc. v. Ronald A. Katz Technology Licensing, L.P., 326 F. Supp. 2d 1060 (C.D.Cal. 2003)* ("credit verification structure," the function of "credit verification" could be accomplished in far too many ways to provide any meaning to the "structure" it described).

> 1 Indeed, during cross-examination at the Markman hearing, Fitness Quest's expert strongly implied that, to him, a "coupling member" had a specific structural meaning when he denied that a number of different arrangements (e.g., numerous levers connected by numerous pivoting joints or a pulley system) proposed by counsel for Precor could be considered a member that coupled the first lever to the last lever.

[*13] Furthermore, the proposition that the *'829 patent*'s use of the term "coupling member" is intended to be a generic term for a set of structural units that couple the foot links to the pivot axis is also suggested in the specification, which asserts that "various mechanical arrangements may be employed to couple the foot links." Col. 4, lines 28-29. Claim 2 proposes an embodiment of claim 1 that includes bell cranks. This intrinsic evidence implies that bell cranks are only one potential embodiment of the coupling members. See *Comark, 156 F.3d at 1187* (claim differentiation). Different types of coupling members other than flywheels and bell cranks are also implied in the specification, where the motion of the foot link end is described as "arcuate," which is defined as "a circular oval or other such closed, curved path of travel." If only bell cranks and flywheels were taught, then the path of travel would only need to be described as a circle.

The second major point of disagreement between the parties' constructions of this claim is the meaning of the phrase "predetermined distance." Fitness Quest argues that this phrase should be understood to mean a "fixed distance. [*14] " Precor argues that this Court should employ Judge Zilly's definition, which rejected "fixed distance" and construed the phrase literally, to mean "a distance determined beforehand." [2] The Court employs Precor's proposed construction based on the doctrine of claim differentiation and because of the Court's conclusion that "arcuate" does not mean only circular.

> 2 Judge Zilly's actual construction for "predetermined distance" was "the amount of separation between one end of a foot link and the pivot axis before use of the claimed device; this amount of separation need not be unvarying while the machine is in use." Order at 17.

First, the doctrine of claim differentiation dictates the conclusion that the end of the foot link is not always at a fixed distance from the axis in the generic embodiment because claim 73 teaches a device "wherein said first and second coupling members couple their respective foot links to said pivot axis *at a fixed distance* therefrom." *'829 Patent*, Col. 8, lines 5-8 (emphasis added). [*15] In order for this claim to mean something different than a claim that describes the distance as predetermined, the term "pre-determined" cannot mean "fixed." Juxtaposing these terms renders the difference obvious: Pre-determined means simply "determined beforehand" while fixed means "always the same."

Second, it is clear that if the path of the foot links can be circular or non-circular, as the Court concludes that arcuate means, the distance from the end of the foot link to the axis will not necessarily be the same. If the foot link path is circular, then the distance will be fixed

and pre-determined. If the foot link path is oval or some other closed curved path of travel, then the distance will be variable and pre-determined.

The Court therefore construes this phrase as follows: "a first and a second structural unit which couples, each associated with a foot link, that attaches its associated foot link to the pivot axis at a distance from the axis that is not necessarily unvarying while the machine is in use, but is determined beforehand."

C. "arcuate path"

Precor proposes that this term be construed the same way Judge Zilly and the patent itself defines it, as "a [*16] circular oval or other such closed, curved path of travel." Fitness Quest proposes that this term be construed as "a circular path." The Court construes this phrase as Precor suggests, as "a circular oval or other such closed, curved path of travel."

Neither party argues that the term "arcuate" was used correctly in the patent. The term means "bent or curved in the form of a bow." Webster's Third New International Dictionary 115 (1981). This seems to contradict the inventor's own definition of the term: "Within the context of this application, 'arcuate' shall refer to a circular oval or other such closed, curved path of travel." Col. 3, lines 12-14. [HN6] Regardless of the word's ordinary meaning -- which neither party argues for -- the Court must defer to the definition contained in the patent where the inventor has clearly set forth a definition. *Johnson Worldwide Assocs. v. Zebco Corp., 175 F.3d 985, 990 (Fed. Cir. 1999)* (patentee acts as his own lexicographer).

Fitness Quest's best arguments against this result are that (1) the patent figures, which include bell crank or fly wheel coupling members, teach a circular path, and (2) Miller refers to a "generally circular" [*17] path during patent prosecution. These arguments are unavailing. First, the figures are designed to illuminate, not limit, the patent. *Amhil Enters. Ltd. v. Wawa, Inc., 81 F.3d 1554, 1559 (Fed. Cir. 1996)*. Second, [HN7] the Court should not employ the patent prosecution history to aid interpretation where there is more reliable and less ambiguous evidence of the claim's meaning. Here, the inventor's lexicography in the specification serves that function.

D. "*a guide* supported by said frame and *operative to engage said foot links*" (terms for construction in italics)

Precor argues that the term "guide" in this phrase should be construed exactly as Judge Zilly construed "a first and a second guide member" in the previous action. The remainder of the phrase, Precor argues, requires no further construction as it is susceptible to ordinary meaning. Fitness Quest argues that the phrase should be construed as "a single track that comes into engagement with the foot links during operation of the device." Fitness Quest argues for this result based on claim differentiation and the fact that "a guide" seems to refer to a single device.

The Court agrees with Fitness [*18] Quest that different language in this term indicates that the patentee intended to teach something different than when the patentee described in claim 1 "a first and a second guide member," the claim term that was construed in the prior action under Judge Zilly. Contrary to Precor's rebuttal, which claims that the single-track construction is absent from the proposed embodiments, the single-track embodiment is arguably represented by figure 5, where there is only one label (32) for the guide track, implying that it is a single track. However, the strength of Fitness Quest's proposed construction breaks down in light of subsequent claims approved by the patent examiner upon re-examination. For example, claim 17 teaches a variation of claim 7 "wherein said guide comprises arm links, said arm links having a first portion coupled to a corresponding foot link. . . ." Claim 17. Claim 17 cannot be reconciled with Fitness Quest's proposed construction of claim 7.

Fitness Quest appears to agree that claim 17 cannot be reconciled with its approach, and argues that, moreover, the second clause that the Court must construe, "operative to engage said foot links," also prevents claim 7 from being [*19] generic to claim 17 or the embodiment in figure 4. Fitness Quest claims that a guiding system cannot be "operative to engage" the foot link if it is permanently coupled to the foot link, as are the arm links in figure 4. Where the coupling is permanent, there can be no functionality which is operative to engage.

The Court rejects Fitness Quest's arguments for invalidity. [HN8] Where a claim term is equally susceptible to multiple interpretations, the Court must construe it so as to preserve its validity. *Modine Mfg. Co. v. U.S. Int'l Trade Comm'n, 75 F.3d 1545, 1557 (Fed. Cir. 1996)*. Here, a reasonable alternative to Fitness Quest's dramatic proposal is presented in the patent prosecution record, where Miller explains why claim 7 (then claim 36) employed the term "guide" instead of "a first and a second guide member":

> Claim 36 eliminates reference to the first and second guide member which are further described as engaging and directing the foot links along a pre-selected, reciprocating path of travel; and alternatively, characterizes this element as a "guide" which engages the foot links and directs them along the pre-selected recip-

> rocating path of travel. This [*20] language acknowledges that the ends of the foot links may be guided by a single wide element such as a track, as well as by two discrete members.

Auvil Decl. Ex. D at FQI00067. The inventor's explanation is clear: the term "guide" is intended as a more generic description of the type of system that could be designed to engage the foot links. The Court further finds that Fitness Quest's argument that the arm links are not operative to engage the foot links if they are permanently attached to the foot links is unavailing.

The Court adopts this construction for the disputed phrase: "a guide, consisting of a straight or curved ramp or arm links, which engages said foot links." This construction satisfies Fitness Quest's argument that "guide" must mean something different that "a first and a second guide member," without rendering claims invalid.

E. "reciprocating path of travel"

Precor argues that this claim should be construed exactly as the patentee defined it in the patent: "any back and forth path of travel which is repetitively traversed by the end of the foot link and includes a generally linear path of travel as is provided by the flat track 28, 32 of the Figure [*21] 1 embodiment as well as curved paths provided by other embodiments shown here in." Col. 3, lines 20-26. Fitness Quest argues for a more straightforward version: "Any back and forth path of travel which is repetitively traversed." Fitness Quest here is in the unusual position of arguing that the longer version might be misinterpreted by the jury as limiting. Precor argues against Fitness Quest's version because it fails to make explicit that the reciprocating path could be straight or curved. Because the Court has included reference to curved or straight paths in the previous claim construction, the longer, more explicit version proposed by Precor is unnecessary. Fitness Quest's shorter, clearer proposed construction will be used.

F. "so that the heel portion of said user's foot travels in a path which does not encompass said pivot axis"

Precor states that this claim should be construed exactly as it is written, because the words are clear to an individual of ordinary skill in the art. Fitness Quest argues that these terms would be ambiguous to a lay jury, contrary to the guidance in *Phillips, 415 F.3d at 1314*. Fitness Quest proposes instead a broader interpretation [*22] that construes the claim as including any potential action where the user's foot crosses the vertical plane created by the pivot axis: "the user's heel never passes rearward beyond a vertical plane contain the pivot axis." Fitness Quest's construction reflects the purpose of the claim, which was proposed by the claim examiner as a way of distinguishing another patent.

However, Fitness Quest's proposed construction is problematic because it means something different than the meaning of the words in the claim. In fact, it is more broad. Fitness Quest's construction of the claim would include a variation of this exercise device which allowed a user's heel to cross a vertical plane established by the pivot axis, but not encircle the pivot axis. Although it is not clear that such a motion is possible using the claimed device, it is preferable to use Precor's more limited instruction. Because "encompass" may be a non-obvious term to a lay jury, however, the Court will add the term "encircle" to clarify: "so that the heel portion of said user's foot travels in a path which does not encompass or encircle said pivot axis."

G. "said arm links having a first portion coupled to a corresponding [*23] foot link and a second distal portion coupled to said frame"

This term arises in claim 17, which reads in full: "17. The exercise device according to claim 7, wherein said guide comprises arm links, said arm links having a first portion coupled to a corresponding foot link and a second distal portion coupled to said frame." The parties disagree on the meaning of the word "distal" in the context of the proper construction of the phrase "a second distal portion." Precor argues that "distal" simply means "at a distance" or, in other words, "at some distance away." The extent of that distance relative to any other of the arm link is not established by this construction. Fitness Quest argues that "distal" should be construed as "beyond the mid-point." In other words, the second portion of the arm link would be shorter than the first portion.

Finding no guidance from the specification or extrinsic evidence, the Court concludes that the words of the claim itself imply that "distal" simply means "further away from." In other words, the second portion of the arm link is further away from the foot link than the first portion. The Court is unpersuaded by Dr. Brienza's conclusory assertion [*24] that someone of ordinary skill in the art would interpret "distal" as meaning at a point beyond the mid point of the arm link. To the contrary, nowhere in the claims is there any implication about the lengths of the first and second portions of the arm link. Based on the proposed embodiments in the figures that include arm links, the Court concludes that "distal" means only that the second portion is further away than the first portion from the foot links that are described in the same claim. Thus, the construction of claim 17 is as follows: "17. The exercise device according to claim 7, wherein said guide comprises arm links, said arm links

having a first portion coupled to a corresponding foot link and a second portion, which is further away from said foot links, coupled to said frame."

IV. Conclusion

The claim terms will be construed in accordance with this order.

DATED this 23rd day of August, 2006.

Robert S. Lasnik

United States District Judge

EXHIBIT B

LEXSEE 2006 U.S. DIST. LEXIS 41453

Caution
As of: Jun 26, 2007

MAURICE MITCHELL INNOVATIONS, L.P., Plaintiff vs. INTEL CORPORATION, Defendant

CASE NO. 2:04-CV-450

UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS, MARSHALL DIVISION

2006 U.S. Dist. LEXIS 41453

June 21, 2006, Decided
June 21, 2006, Filed

SUBSEQUENT HISTORY: Summary judgment granted by *Maurice Mitchell Innovations, L.P. v. Intel Corp., 2006 U.S. Dist. LEXIS 85194 (E.D. Tex., Nov. 22, 2006)*

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiff patentee alleged defendant competitor infringed a claim of its patent which disclosed a bimemory independent central processing unit microcomputer. The central dispute between the parties was whether the second limitation "a path configuring means," should be construed as a means-plus-function limitation under *35 U.S.C.S. § 112*, para. 6.

OVERVIEW: A prior judge's opinion in another case involving the patent was entitled to reasoned deference but was not fully adopted. The use of "means" in connection with "a path configuring means," suggested it was not inserted indiscriminately or mechanically. There was no evidence that one of ordinary skill in the art would accord "path configuring" a structural connotation. Instead, the record revealed that it was a functional limitation. The stated function was "path configuring." By the claim language, the "path control circuits" were not part of the "path configuring means." There was a presumption that *§ 112*, para. 6, applied. The specification indicated that the "switching unit" was the structure that performed the function of configuring paths. "Switch" had a functional connotation, and a structural connotation did not trump the patentee's choice to invoke *§ 112*, para. 6, by using "switch means," at least since there was no evidence in the intrinsic record to the contrary. The specification indicated "switch" in "switch means" was not used in a structural sense, but in a functional sense. The context indicated "switch" was being used functionally.

OUTCOME: The limitation "a path configuring means" was construed as a means-plus-function limitation. The function of "a path configuring means" was "path configuring." The function of the "first switch means" was construed as connecting the dedicated memory address, data, and control circuits of said path configuring means to each of the first three sets of contacts. "Switching unit" was the structure that performed the function of configuring paths.

LexisNexis(R) Headnotes

Patent Law > Infringement Actions > Claim Interpretation > Aids
Patent Law > Infringement Actions > Claim Interpretation > Construction Preferences
[HN1] It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude. In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent.

Patent Law > Infringement Actions > Claim Interpretation > Aids
Patent Law > Infringement Actions > Claim Interpretation > Construction Preferences
[HN2] The patent claims themselves provide substantial guidance in determining the meaning of particular claim terms. First, a term's context in the asserted claim can be very instructive. Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. Differences among the claim terms can also assist in understanding a term's meaning. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. Claims must be read in view of the specification, of which they are a part.

Patent Law > Infringement Actions > Claim Interpretation > Aids
Patent Law > Infringement Actions > Claim Interpretation > Construction Preferences
[HN3] The specification of a patent claim is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term. This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. In these situations, the inventor's lexicography governs. Also, the specification may resolve ambiguous claim terms where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone. But, although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent.

Patent Law > Infringement Actions > Claim Interpretation > Aids
[HN4] Although extrinsic evidence can be useful in patent claim construction, it is less significant than the intrinsic record in determining the legally operative meaning of claim language. Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition is entirely unhelpful to a court. Generally, extrinsic evidence is less reliable than the patent and its prosecution history in determining how to read claim terms.

Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN5] Where a patent claim limitation is expressed in "means plus function" language and does not recite definite structure in support of its function, the limitation is subject to *35 U.S.C.S. § 112*, para. 6. In part, *§ 112*, para. 6, mandates that such a claim limitation be construed to cover the corresponding structure described in the specification and equivalents thereof. Accordingly, when faced with means-plus-function limitations, courts must turn to the written description of the patent to find the structure that corresponds to the means recited in the limitations.

Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN6] Construing a means-plus-function limitation involves multiple inquiries. The first step in construing a means-plus-function limitation is a determination of the function of the means-plus-function limitation. Once a court has determined the limitation's function, the next step is to determine the corresponding structure disclosed in the specification. A structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim. Moreover, the focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is clearly linked or associated with the recited function.

Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
Patent Law > Infringement Actions > Claim Interpretation > Fact & Law Issues
Patent Law > Preclusion > Collateral Estoppel
[HN7] The United States Supreme Court sees the importance of uniformity in the treatment of a given patent as an independent reason to allocate all issues of construction to the court. It was just for the sake of such desirable uniformity that Congress created the United States Court of Appeals for the Federal Circuit as an exclusive appellate court for patent cases. Uniformity would, however,

be ill served by submitting issues of document construction to juries. But whereas issue preclusion could not be asserted against new and independent infringement defendants even within a given jurisdiction, treating interpretive issues as purely legal will promote (though it will not guarantee) intrajurisdictional certainty through the application of stare decisis on those questions not yet subject to interjurisdictional uniformity under the authority of the single appeals court.

Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Judicial Estoppel
Patent Law > Infringement Actions > Claim Interpretation > General Overview
Patent Law > Jurisdiction & Review > Standards of Review > General Overview
Patent Law > Preclusion > General Overview
[HN8] Judicial estoppel does not normally apply on appeal to prevent a party from altering an unsuccessful position before the trial court, and estoppel would not bar a party from departing from a patent claim construction theory unsuccessfully advocated before the trial court.

Patent Law > Infringement Actions > Claim Interpretation > Fact & Law Issues
[HN9] The duty of the trial judge is to determine the meaning of the patent claims at issue, and to instruct the jury accordingly. In the exercise of that duty, the trial judge has an independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties.

Evidence > Inferences & Presumptions > Creation of Presumptions
Evidence > Procedural Considerations > Burdens of Proof > Preponderance of Evidence
Patent Law > Claims & Specifications > Description Requirement > Means Plus Function
Patent Law > Infringement Actions > Burdens of Proof
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN10] The use of the word "means" in a patent claim raises a presumption that *35 U.S.C.S. § 112*, para. 6, applies. This presumption can be overcome by a showing that the claim recites no function or provides sufficient structure, material, or acts to perform the recited function. The word "means" is sometimes used in instances where it is clear that "means" adds nothing to the limitation, i.e., the limitation is structurally complete and the context of the claim suggests simply that the patent drafter was enamored with the word "means." In general, the presumption imposes a burden on the party opposing the effect of the presumption to present evidence to rebut the presumption. This burden of rebutting the presumption must be met by a preponderance of the evidence. If the party who must bring forth evidence fails to proffer sufficient evidence to meet its burden, the presumption, either for or against the application of *§ 112*, para. 6, prevails.

Patent Law > Claims & Specifications > Description Requirement > Means Plus Function
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN11] In determining whether a claim term recites sufficient structure, courts examine whether it has an understood meaning in the art. To aid this determination, courts look at whether the term, as the name for the structure, has a reasonably well understood meaning in the art, keeping in mind that a claim term need not call to mind a single well-defined structure to fall within the ambit of *35 U.S.C.S. § 112*, para. 6.

Patent Law > Claims & Specifications > Description Requirement > Means Plus Function
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN12] A district court in a patent case should not redefine the stated function in a means-plus-function limitation, i.e., by expanding or narrowing the stated function.

Patent Law > Claims & Specifications > Description Requirement > Means Plus Function
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN13] The stated function of a phrase "a path configuring means" is "path configuring."

Patent Law > Infringement Actions > Claim Interpretation > General Overview
[HN14] The terms "comprising," "comprises," and "includes" are open-ended terms in a patent claim.

Evidence > Inferences & Presumptions > Presumptions
Patent Law > Claims & Specifications > Description Requirement > Means Plus Function
Patent Law > Infringement Actions > Claim Interpretation > Construction Preferences
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN15] In deciding whether a particular patent claim limitation should be construed as a means-plus-function

limitation or not, the issue is not solely whether a dictionary definition can be found for a term, but rather how a claim limitation should be construed in the manner intended by the drafter. Insofar as *35 U.S.C.S. § 112*, para. 6, is concerned, an applicant has a choice whether to invoke both the advantages and disadvantages of presenting means-plus-function limitations -- or not. An applicant signals an intent to invoke the advantages and disadvantages of *§ 112*, para. 6, by using the word "means." Similarly, an applicant signals an intent not to invoke the advantages and disadvantages of *§ 112*, para. 6, by not using the word "means." Although the presence or absence of the word "means" is not necessarily dispositive, the presence or absence of the word "means" creates a rebuttable presumption that *§ 112*, para. 6, applies, or does not apply, respectively. The use of the term "means" is 'central to the analysis because the term "means," particularly as used in the phrase "means for," is part of the classic template for functional claim elements, and has come to be closely associated with means-plus-function claiming. Accordingly, the presumption is a strong one that is not readily overcome.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

[HN16] Claim construction is to resolve the disputed meaning of a term or phrase -- not an invitation for wholesale claim revision.

Patent Law > Claims & Specifications > Description Requirement > Means Plus Function
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function

[HN17] The United States Court of Appeals for the Federal Circuit has looked to the patent claim specification to determine whether a term has been used to define structure.

Patent Law > Infringement Actions > Claim Interpretation > General Overview

[HN18] Claim construction is intended to resolve disputes between the parties on the meaning of claim terms and phrases.

Evidence > Procedural Considerations > Burdens of Proof > Clear & Convincing Proof
Patent Law > Claims & Specifications > Description Requirement > Means Plus Function
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function

[HN19] Whether sufficient structure is disclosed in a patent specification must be based on the understanding of one skilled in the art, and asserting that a means-plus-function limitation lacks structural support requires clear and convincing evidence because the consequence is invalidity.

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JUDGES: LEONARD DAVIS, UNITED STATES DISTRICT JUDGE.

OPINION BY: LEONARD DAVIS

OPINION

MEMORANDUM OPINION

This Claim Construction Opinion construes terms in *United States Patent No. 4,875,154* ("the [*2] *'154 patent*").

BACKGROUND

Plaintiff Maurice Mitchell Innovations, L.P. ("Mitchell") alleges that Defendant Intel Corporation ("Intel") infringes claim 1 of the *'154 patent*. In general, the *'154 patent* discloses what the patent refers to as a "Bimemory Independent CPU ('central processing unit')" microcomputer, also referred to as a "BICPU microcom-

puter." According to the specification, the BICPU microcomputer

> is comprised of a known CPU chip with additional circuitry to enable the CPU to interact in a multi BICPU microcomputer system. Each BICPU microcomputer within a system is supplied with an assigned standard memory-mechanically and logically connected to its BICPU's "A" bus circuits. The BICPU microcomputer is also provided with connectors enabling the CPU to be connected to system buses.

Col. 7:3-12. In general terms, the specification says that the invention allows a number of BICPU microcomputers to be linked together in a "bimemory independent pattern" using a "standard" set of system buses to mechanically interconnect "B" or "C" bus circuits of any two BICPU microcomputers. Col. 7:12-22.

Limitations from claim 1 of the *'154 patent* have been previously [*3] construed by United States District Judge Susan Illston of the United States District Court for the Northern District of California in *Maurice Mitchell v. Samsung Electronics Co., Ltd.*, No. C 01-0295 SI, (N.D. Cal. Jan. 29, 2002). The parties have agreed to adopt Judge Illston's construction for most of the terms in claim 1 of the *'154 patent*.

APPLICABLE LAW

[HN1] "It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005)* (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004))*. In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. *See id.; C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 861 (Fed. Cir. 2004)*; *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc., 262 F.3d 1258, 1267 (Fed. Cir. 2001)*. This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips, 415 F.3d at 1314*; [*4] *C.R. Bard, Inc., 388 F.3d at 861*. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips, 415 F.3d at 1312-13*; *Alloc, Inc. v. ITC, 342 F.3d 1361, 1368 (Fed. Cir. 2003)*.

[HN2] The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips, 415 F.3d at 1314*. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id. at 1314-15*. Claims "must be read in view of the specification, of which they are a part." *Id. at 1315*. (quoting *Markman v. Westview Instruments, Inc., 52 F.3d 967, 978 (Fed. Cir. 1995))*. [*5] [HN3] "[T] he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996))*; *Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002)*. This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips, 415 F.3d at 1316*. In these situations, the inventor's lexicography governs. *Id.* Also, the specification may resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc., 299 F.3d at 1325*. But, "although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Comark Communs. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998)*; [*6] *see also Phillips, 415 F.3d at 1323*. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc., 381 F.3d 1352, 1356 (Fed. Cir. 2004)* ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent.").

[HN4] Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips, 415 F.3d at 1317* (quoting *C.R. Bard, Inc., 388 F.3d at 862*). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id. at 1318*. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, [*7] unsupported assertions as

to a term's definition is entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

The patent in suit also contains means-plus-function limitations that require construction. [HN5] Where a claim limitation is expressed in "means plus function" language and does not recite definite structure in support of its function, the limitation is subject to *35 U.S.C. § 112*, P 6. *Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997)*. In relevant part, *35 U.S.C. § 112*, P 6 mandates that "such a claim limitation 'be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.'" *Id.* (citing *35 U.S.C. § 112*, P 6). Accordingly, when faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations]." *Id.*

[HN6] Construing a means-plus-function limitation involves multiple inquiries. "The first [*8] step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc., 248 F.3d 1303, 1311 (Fed. Cir. 2001)*. Once a court has determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification. . . ." *Id.* A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* Moreover, the focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id.*

THE *'154 PATENT* [1]

1 Appendix A contains claim 1 of the patent with the currently disputed terms in bold.

"*A microcomputer data* [*9] *processing apparatus, comprising*"

The Court and the parties agree that the phrase should be construed as "a single microcomputer, which includes, at the least, a microprocessor, storage *(e.g.* memory) and input/output device enabling the system to perform operations on data, which comprises what is set forth in the claim."

"*a central processing unit (CPU)*"

The Court and the parties agree that the term should be construed as "the unit of a computing system having the circuits that control the interpretation of instructions and their execution. A CPU includes, at least, an arithmetic logic unit and associated registers."

"*a path configuring means*"

The central dispute between the parties is whether limitation [2] "a path configuring means," should be construed as a means-plus-function limitation under *§ 112*, P 6. [2] Judge Illston concluded that the limitation should be construed as a means-plus-function limitation governed by *§ 112*, P 6, and Intel urges that is the correct construction. The Court agrees with Judge Illston and Intel that this limitation should be construed as a means-plus-function limitation under *35 U.S.C. § 112* [*10] , P 6.

2 Judge Illston in her opinion added numbering to the claim limitations to facilitate discussion. The parties have continued to use those numbers in referring to specific limitations. Accordingly, claim 1 in Appendix A includes the numbering added by Judge Illston, shown in brackets.

An initial question is the extent to which this Court is bound by Judge Illston's construction. Intel cites *Markman v. Westview Instruments, Inc., 517 U.S. 370, 390, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996)*, arguing that the Court's comment relating to the "importance of uniformity in the treatment of a given patent," favors "consistent claim construction for a given patent." Mitchell replies that collateral estoppel does not apply to Judge Illston's decision, citing *RF Delaware, Inc. v. Pacific Keystone Technologies, Inc., 326 F.3d 1255, 1261 (Fed. Cir. 2003)*(discussing elements of collateral estoppel).

The Supreme Court's comment in *Markman* was in the context of explaining why claim construction was deemed a [*11] matter of law for the court, rather than an issue of fact for a jury. The Court wrote:

> Finally, [HN7] we see the importance of uniformity in the treatment of a given patent as an independent reason to allocate all issues of construction to the court. It was just for the sake of such desirable uniformity that Congress created the Court of Appeals for the Federal Circuit as an exclusive appellate court for patent cases. Uniformity would, however, be ill served by submitting issues of document construction to juries.

Markman, 517 U.S. at 390-91. The Court added:

> But whereas issue preclusion could not be asserted against new and independent

> infringement defendants even within a given jurisdiction, treating interpretive issues as purely legal will promote (though it will not guarantee) intrajurisdictional certainty through the application of *stare decisis* on those questions not yet subject to interjurisdictional uniformity under the authority of the single appeals court.

Id. at 391.

Judge Illston's opinion was not appealed to the Federal Circuit, and Intel points to no authority that would accord that opinion issue preclusion [*12] or collateral estoppel effect. Nor does Intel assert that Mitchell is bound by principals of judicial estoppel. Indeed, the Federal Circuit recently held *in Lava Trading, Inc. v. Sonic Trading Management, LLC., 445 F.3d 1348, 2006 WL 1008842, at *3 (Fed. Cir. 2006)* that [HN8] "judicial estoppel does not normally apply on appeal to prevent a party from altering an unsuccessful position before the trial court," and "estoppel would not bar Lava from departing from a claim construction theory unsuccessfully advocated before the trial court." *Id; see also SanDisk Corp. v. Memorex Prods., Inc., 415 F.3d 1278 (Fed. Cir. 2005)*(generally disfavoring applying principals of estoppel to "evolving" claim construction).

Although not binding on this Court, Judge Illston's thoughtful and thorough opinion is nevertheless entitled to reasoned deference under the broad principals *of stare decisis* and the goals articulated by the Supreme Court in *Markman*, even though *stare decisis* may not be applicable *per se*. Accordingly, the Court accepts the premise that a uniform treatment of claim construction is desirable, but rejects Intel's suggestion that this [*13] Court is bound in any way to accept the claim construction by Judge Illston. This Court will take into account Judge Illston's claim construction as a thoughtful and thorough analysis of the parties' arguments involving the same patent and the same claim-but, in the end, will render its own independent claim construction. *See e.g.*, [HN9] *Exxon Chem. Patents, Inc. v. Lubrizol Corp., 64 F.3d 1553, 1555 (Fed. Cir. 1995)*("The duty of the trial judge is to determine the meaning of the claims at issue, and to instruct the jury accordingly. In the exercise of that duty, the trial judge has an independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties. ")(citations omitted). The Court does, however, agree with Judge Illston's opinion in most respects.

Mitchell argues that the disputed phrase should not be construed as a means-plus-function limitation under *35 U.S.C. § 112*, P 6 because claim 1, as a whole, recites sufficient structure and location for the "path configuring means" such that *§ 112*, P 6 does not apply. Mitchell asserts that the function of "path configuring" is to form paths. Mitchell [*14] argues that the memory address, data, and control circuits specified in limitations [6], [7], and [8] of claim 1 provide sufficient structure to perform that function. Mitchell further cites *Apex, Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1373 (Fed. Cir. 2003)* for the proposition that the term "circuit" means "to form paths," arguing that the presence of the word "circuit" in element [6] of claim 1 is sufficient structure to perform the path configuring function. Mitchell additionally argues that [1] (the CPU limitation) and [3] (the control circuit limitation) provide further structure to perform the path configuring function. Finally, Mitchell contends that limitations [9] and [10] of claim 1 indicate the location of the path configuring means. Mitchell also points to various sections of the specification arguing that the sections support its contention that limitations [1], [3], [6], [7], [8], [9], and [10] provide sufficient structure within claim 1 to perform the function of the path configuring means.

[HN10] The use of the word "means" raises a presumption that *§ 112*, P 6 applies. *See Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1248 (Fed. Cir. 2005).* [*15] This presumption can be overcome by a showing that the claim recites no function or provides sufficient structure, material, or acts to perform the recited function. *See Sage Prods., Inv. v. Devon Indus. Inc., 126 F.3d 1420, 1427 (Fed. Cir. 1997).* The word "means" is sometimes used in instances where it is clear that "means" adds nothing to the limitation, *i.e.*, the limitation is structurally complete and the context of the claim suggests simply that the patent drafter was enamored with the word "means." *See e.g., Allen Eng'g Corp. v. Bartell Indus., 299 F.3d 1336, 1348 (Fed. Cir. 2002); Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed. Cir. 1996).* In general, the presumption imposes a burden on the party opposing the effect of the presumption to present evidence to rebut the presumption. In this case, the presence of the word "means" makes it Mitchell's burden to come forward with a showing rebutting the presumption. *See Apex, 325 F.3d at 1372* (explaining that the burden flows from *Rule 301 of the Federal Rules of Evidence*). According to the Federal Circuit, "[t] his burden [*16] must be met by a preponderance of the evidence." *Id.* (citing *A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1045 (Fed. Cir. 1992)).* The Federal Circuit has explained that "[i] f the party who must bring forth evidence fails to proffer sufficient evidence to meet its burden, the presumption, either for or against the application of *§ 112*, P 6, prevails." *Id.*

Mitchell has not overcome the presumption that *§ 112*, P 6 applies. First, the word "means" is used in connection with limitation [2] "a path configuring means,"

limitations [9] and [10], *i.e.*, "first" and "second" "switch means," and limitation [13] "means for causing . . . ." In the context of the claim as a whole, this suggests the drafter did not insert "means" indiscriminately or mechanically, such as in *Allen Engineering* and *Cole*, but rather chose when to use-and when not to use-the word "means." That "means" was intentional is further supported by the limitation. If "means" is deemed superfluous, the limitation would read "a path configuring," which on its face has no meaning. Grammatically, the "path configuring" phrase lacks an object. Here, the drafter chose [*17] to use the word "means" as the object, rather than a term or phrase that named or connoted structure, even in a generic sense.

Second, as Judge Illston observed: "Mitchell has not provided the Court with any other evidence, whether it be from a technical dictionary or any other reference, that a 'path configuring' device had a structure that was understood by people skilled in the art at the time of the invention." *Maurice Mitchell v. Samsung Elecs. Co., Ltd.*, slip op. at 8-9. [HN11] In determining whether a claim term recites sufficient structure, courts examine whether it has an understood meaning in the art. *Watts v. XL Sys., Inc., 232 F.3d 877, 880-81 (Fed. Cir. 2000)*. To aid this determination, courts look at whether the "term, as the name for the structure, has a reasonably well understood meaning in the art," keeping in mind that a claim term "need not call to mind a single well-defined structure" to fall within the ambit of *§ 112*, P 6. *Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996)*; *see also Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1359 (Fed. Cir. 2004)*. The record reveals [*18] no evidence that one of ordinary skill in the art would accord "path configuring" a structural connotation. Instead, the record reveals that this is a functional limitation.

In *Signtech USA Ltd. v. Vutek, Inc., 174 F.3d 1352, 1356 (Fed. Cir. 1999)*, the Federal Circuit observed that "[i] n this case, the claim element 'ink delivery means' uses the term 'means' in association with a function, namely 'ink delivery.' Although the phrase 'means for' is not used, the phrase 'ink delivery means' is equivalent to the phrase 'means for ink delivery,' because 'ink delivery' is purely functional language." The claim language here is analogous. It is clear that "path configuring" states function, rather than structure, in a manner analogous to "ink delivery" in *Signtech.*

Mitchell's primary argument is that other limitations in the claim, principally limitations [6] through [8], provide the requisite structure for performing the claimed function. The Court disagrees; but, before turning to the substance of that argument, the Court must resolve the "function" recited in the term "a path configuring means."

Intel urges that limitations [6] through [8] (and/or other [*19] claim limitations) do not provide the structure necessary to perform the "path configuring" function as defined by Judge Illston. Mitchell disagrees that Judge Illston's discussion of the "function" of the "path configuring means" provides a basis for deciding whether limitations [6] through [8] (and/or other limitations in claim 1) recite structure sufficient to perform the claimed function.

[HN12] A district court should not redefine the stated function in a means-plus-function limitation, *i.e.*, by expanding or narrowing the stated function. *See Micro Chem., Inc. v. Great Plains Chem. Co., Inc. (Micro Chem. II), 194 F.3d 1250, 1258 (Fed. Cir. 1999)*("The statute does not permit limitation of a means-plus-function claim by adopting a function different from that explicitly recited in the claim. Nor does the statute permit incorporation of structure from the written description beyond that necessary to perform the claimed function.").

Judge Illston concluded that

> [t] he 'path configuring' function creates the path that dedicated memory address, data, and control signals follow at a particular time from among the variety of possible alternative signal paths [*20] within the path configuring means that permit the CPU to be interconnected with various alternative sets of contacts. 'Path configuring' involves creating one path in the path configuring means to permit the CPU to be interconnected to one set of contacts, and creating at a different time another path in the path configuring means to permit the CPU to be interconnected to another set of contacts.

Maurice Mitchell v. Samsung Elecs. Co., Ltd., slip op. at 10-11.

The parties' current disagreement as to whether Judge Illston accurately articulated the "function" intended by the claim language "path configuring" is largely due to Mitchell's wavering on the proper construction. In its opening brief, Mitchell urged that "path configuring means" should be construed as "the 'path configuring means' defined structurally by elements [1], [3], [6], [7] and [8] creates the path that dedicated memory address, data, and control signals follow at a particular time from among a variety of possible alternative signal paths within the path configuring means that permit the CPU to be interconnected with various alternative sets of contacts. 'Path configuring means' involves

creating [*21] one path in the path configuring means to permit the CPU to be interconnected to one set of contacts, and creating at a different time another path in the path configuring means to permit the CPU to be interconnected to another set of contacts." Intel responded that both parties had accepted Judge Illston's construction of the "function" of the disputed phrase. Intel argued that the other limitations that Mitchell relied on in claim 1 could not perform those functions. In reply, Mitchell urged that "Plaintiff does not accept the path configuring function of Judge Illston since 'path configuring' means 'path forming.'"

In this instance, the Court must depart somewhat from Judge Illston's construction, recognizing that the parties here are advancing arguments and disagreements that may not have been highlighted before Judge Illston. Pursuant to *Micro Chemical II*, [HN13] the stated function of the disputed phrase "a path configuring means" is "path configuring." The Court may not alter that stated function. Furthermore, that is the function that must be used to determine the "corresponding structure" for performing that function, as well as whether limitations [6] through [8] recite [*22] sufficient structure for performing that function-not Judge Illston's construction of that function. *See Micro Chem. II, 194 F.3d at 1258* (stating that "[a] n error in identification of the function can improperly alter the identification of structure in the specification corresponding to that function"). For the same reason, the Court rejects Mitchell's effort to "construe" the stated function as "path forming." Accordingly, the Court construes the function in claim 1 as "path configuring." That is the function that controls the analysis.

Turning then to Mitchell's argument that limitations [6] through [8] provide the structure for performing that function, the language and structure of the claims suggest otherwise. First, claim 1 begins by broadly calling for "[1] a Central Processing Unit (CPU)" and "[2] a path configuring means," as well as "[3] path control circuits connecting said CPU to said path configuring means." Contrary to Mitchell's suggestion that limitation [3] adds structure to the "path configuring means," that limitation clearly calls for "path control circuits" that connect the CPU "to said path configuring means." By the language [*23] of the claim, the "path control circuits" are not part of the "path configuring means."

Claim 1 then, using the phrase "wherein said CPU further comprises," additionally defines the CPU in limitation [5] as comprising "a dedicated memory address circuit." Similarly, limitation [6], using the same form of introductory phrase "wherein said path configuring means further comprises," additionally defines the "path configuring means" as comprising "a dedicated memory address circuit." Limitation [7] in the same fashion, "wherein each said dedicated memory address . . . circuit includes," then further defines those circuits. And limitation [8] further defines the memory control lines. In short, the structure and language of claim 1 first introduces the CPU and "path configuring means" as broad claim elements and then further defines or limits each of those elements.

[HN14] The terms "comprising," "comprises," and "includes" are open-ended terms. *See CollegeNet, Inc. v. Apply Yourself, Inc., 418 F.3d 1225, 1235 (Fed. Cir.2005)*("The transitional term "comprising" . . . is inclusive or open-ended and does not exclude additional, unrecited elements or method steps.' *Ga.-Pac. Corp. v. United States Gypsum Co., 195 F.3d 1322, 1327-28 (Fed. Cir. 1999).* [*24] 'A drafter uses the term "comprising" to mean "I claim at least what follows and potentially more."' *Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc., 212 F.3d 1377, 1383-84 (Fed. Cir. 2000)*"); *Rocknel Fastener, Inc. v. United States, 267 F.3d 1354, 1360 (Fed. Cir. 2001)* ("That definition, which uses the term 'includes' and thus is open-ended, consists of three elements. . . .").

Thus, when the patentee began claim 1 with "[a] microcomputer . . . apparatus, comprising: . . . [2] a path configuring means," the claim at that juncture called for an undefined "means" for performing a "path configuring" function. Limitations [6] *et seq.*, also open-ended ("further comprises"), further qualified or limited the "means," but did not exclude further components. Indeed, that is clear from the claims that follow claim 1.

For example, claim 2 adds that the "path configuring means" of claim 1 "further includes" a "first internal buss [sic.]." *See* Col. 91:38-56. And claim 3 adds that the "path configuring means" of claim 1, as further defined in claim 2, "is further comprised of" "third," "fourth" and "fifth" "switch means" *etc. See* Cols. 91: [*25] 57-92:2.

Thus, the claim language itself suggests that whatever structure is recited in limitations [6] through [8] in claim 1 alone may not be necessarily sufficient to perform the stated "path configuring" function. That is, limitations [6] through [8] in claim 1 may add structure in the form of dedicated memory address, data and control circuits, but doing so does not necessarily provide sufficient structure to perform the function of "path configuring" without, for example, the several "switch means" of claim 3.

The Court also rejects Mitchell's contention that the word "circuit" in element [6] of claim 1 provides sufficient structure to perform the "path configuring" function. First, *Apex* is distinguishable from the present case because in *Apex*, the word "circuit" was found to connote some structure but in the absence of the word "means" and without the presumption that *§ 112*, P 6 applied. *See 325 F.3d at 1373*. Here, there is a presumption that *§*

112, P 6 applies, and the word "circuit" is not found in the disputed term. Moreover, the specification indicates that the "switching unit," described in Figure 1, is the structure that performs the [*26] function of configuring paths:

> The memory access circuits (address, data, control) of the CPU are connected to a switching unit. Three buses, "A", "B" and "C" are connected to the switching unit. The internal structure of the switching unit is configured solely by the CPU to create a signal path connecting the memory access circuits of the CPU to the desired bus or buses or any selected portion thereof.

Col. 7:37-44. Furthermore, even if "circuit" was deemed structural, the fact remains that the actual recited structure of elements [6] through [8] is insufficient to perform the "path configuring" function for the reasons discussed above.

Accordingly, the Court agrees with Judge Illston that this "limitation clearly states a function for the means, namely 'path configuring.'" *Maurice Mitchell v. Samsung Elecs. Co., Ltd.*, slip op. at 9. Although Judge Illston went on to adopt a "construction" of the "path configuring" function, and although that construction appears to be accurate in terms of the specification, the Court, as noted above, is bound by the actual stated function in the claim. Further, in light of the foregoing, that additional construction is not [*27] necessary to resolve the parties' dispute.

The Court agrees with Judge Illston and Intel and identifies the corresponding structure as "the structure described in the specification for performing the path configuring function is a structure having the first through fifth internal buses, the junction, and the third through seventh switch means arranged as shown in Switching Unit 100 of Figure 1 and described in the specification. The dedicated memory, address, data, and control circuits of the path configuring means as required in the sixth limitation, are the circuits that make up those internal buses, junction, and switch means. As required in the seventh limitation, each such dedicated memory address, data, and control circuit includes a plurality of dedicated memory address, data, and control lines." Mitchell does not provide a proposed corresponding structure for the "path configuring means." However, Intel's proposed structure is identical to the structure identified by Judge Illston in her Claim Construction Order.

Judge Illston, noting that there was "some discussion" of the structure at several points in the specification, went on to describe that structure. In doing so, [*28] Judge Illston used language that appears in the specification, and in other claims, for example claims 2 and 3, but not claim 1. Furthermore, Judge Illston refers to "the first through fifth internal buses" and the "third through seventh switch means." Those terms do not appear in claim 1. However, as noted above, other claims, for example claims 2 and 3, provide that the "path configuring means" of claim 1 is "further comprised" of those elements. Accordingly, the Court agrees with Judge Illston and Intel that the corresponding structure is "the structure described in the specification for performing the path configuring function is a structure having the first through fifth internal buses, the junction, and the third through seventh switch means arranged as shown in Switching Unit 100 of Figure 1 and described in the specification."

The Court further agrees with Judge Illston that limitation [6] in claim 1 includes the dedicated memory, address, data, and control circuits, as further defined in limitations [7] through [8], as part of the path configuring means. The Court also agrees with Judge Illston that limitation [7] in claim 1 provides that "each said dedicated memory [*29] address, data, and control circuit includes a plurality of dedicated memory address, data, and control lines respectively," and thus the corresponding structure includes such lines. Finally, although they are not required by limitation [6] of claim 1, it is clear that buses, junctions and switch means 3 through 7 are added by claims 2 and 3 and constitute part of the "path configuring means." 1For the reasons expressed above, the Court identifies the structure of the "path configuring means" consistently with Judge Illston's previous Claim Construction Order.

"*path control circuits connecting said CPU to said path configuring means*"

The Court and the parties agree that the term should be construed as "circuits that physically connect the CPU to the path configuring means, and that operate on input signals from the CPU and generate appropriate output signals to control the path configuring means, and thereby create the path for memory address, data and control signals to follow along various alternative possible paths."

"*a plurality of contacts comprised of a plurality of distinct sets*"

The Court and the parties agree that the term should be construed as [*30] "a plurality of physically distinguishable sets (that is, collections) of electrical contacts with each set (or collection) having contacts for memory address, data, and control signals. A 'contact' is a conduc-

tor, such as a pad of metal on a semiconductor chip or a pin, for physically connecting with another such conductor to permit current to flow between the two conductors."

"*wherein said CPU further comprises a dedicated memory address circuit, a dedicated memory data circuit, a dedicated memory control circuit and a dedicated power circuit*"

The Court and the parties agree that the term should be construed as "the CPU contains four circuits. A 'circuit' means an arrangement of electronic components interconnected by lines that has at least one input and one output terminal, and whose purpose is to produce at the output terminal a signal that is a function of the signal at the input terminal. A 'circuit' is not a line. A 'dedicated' circuit means a circuit that provides a clear unbroken communications path from one station to another and that is always available for use. A 'dedicated memory' circuit means a circuit that is always available for the purpose of transmitting [*31] signals between the CPU and memory. 'Memory' means the addressable storage in which instructions and other data are stored and retrieved for execution and processing. A 'dedicated power circuit' means a circuit that is always available to provide power to the CPU. One of the four circuits is a 'dedicated memory address circuit' meaning a circuit that is always available to transmit signals representing memory addresses between the CPU and memory. Another is 'a dedicated memory data circuit' meaning a circuit that is always available to transmit signals representing data for storage in memory between the CPU and memory. Another is 'dedicated memory control circuit,' meaning a circuit that is always available to carry signals representing memory control functions between the CPU and memory."

"*wherein said path configuring means further comprises a dedicated memory address circuit, a dedicated memory data circuit and a dedicated memory control circuit*"

The Court and the parties agree that the term should be construed as "the path configuring means contains three types of circuits. One is a 'dedicated memory address circuit,' meaning a circuit that is always available to [*32] transmit signals representing memory addresses to memory. Another is 'a dedicated memory data circuit,' meaning a circuit that is always available to transmit signals representing data to or from memory. Another is 'a dedicated memory control circuit,' meaning a circuit that is always available to transmit signals representing memory control functions to or from memory."

"*wherein each said dedicated memory address, data and control circuit includes a plurality of dedicated memory address, data, and control lines respectively*"

The Court and the parties agree that the term should be construed as "each dedicated memory address circuit of the CPU and the path configuring means has a plurality of dedicated memory address lines. Each dedicated memory data circuit of the CPU and the path configuring means has a plurality of dedicated memory data lines. Each dedicated memory control circuit of the CPU and the path configuring means has a plurality of dedicated memory control lines. A 'line' is a conductor that may be used to carry a signal."

"*wherein said memory control lines are comprised of a read /write line, timing lines and status lines*"

The Court and the parties [*33] agree that the term should be construed as "the dedicated memory control lines of the CPU and path configuring means include a single line that carries read and write signals, a plurality of memory lines that carry timing signals, and a plurality of memory lines that carry status signals."

"*first switch means comprised of at least three distinct parts for connecting said dedicated memory address, data, and control circuits of said path configuring means to each of said first three sets of contacts*"

The Court agrees with Intel that this limitation should be construed as a means-plus-function limitation under *35 U.S.C. § 112*, P 6. Mitchell argues that the "first switch means" is not a means-plus-function limitation. Mitchell contends that "switch" is a structural term and argues that claim 1 recites sufficient structure and location to perform the function of the "first switch means."

Mitchell cites *Vitronics, 90 F.3d at 1584*, for the proposition that the term "switch" is commonly used and understood as a structural element by those skilled in the art. Mitchell also points to the IEEE Dictionary, which provides multiple definitions [*34] of the word "switch," one being "a device for making, breaking or changing the connections in an electrical circuit." Mitchell contends that the use of the word "means" in association with the word "switch" does not necessitate the application of *§ 112*, P 6. Mitchell also cites two district court opinions where courts found that "switch means" was not subject to *§ 112*, P 6 because the claim language recited sufficient structure and or location to rebut the presumption of its application. *See Gen. Creation v. Leapfrog Enters., Inc., 232 F. Supp. 2d 661,672-73 (W.D. Va. 2002)*; *MediaCom Corp. v. Rates Tech., Inc., 4 F. Supp. 2d 17, 27 (D. Mass. 1998)*.

Mitchell further argues that the specification supports its contention that the "switch means" is not subject to *§ 112*, P 6. Mitchell cites column 19, lines 38 through 41, which state, "These switches are utilized to connect the address, data and control lines necessary for the proper memory access between the buses," and column

19, line 64 through column 20, line 5, which state that each first through seventh switch means "actually represents a plurality of logical elements, each of which can logically [*35] connect or logically disconnect an address, data, or control circuit that is mechanically connected to the switch means. . . ." Finally, Mitchell contends that claim language itself identifies the location of the structure as between the dedicated memory address, data, and control circuits of the path configuring means and the sets of contacts.

Intel argues that the presumption that *§ 112*, P 6 applies has not been overcome because the claim does not identify sufficient structure to perform all of the recited functions of the switch means. The parties do not dispute that the stated function of the "first switch means" is "for connecting said dedicated memory address, data, and control circuits of said path configuring means to each of said first three sets of contacts." Also, the claim provides that the "first switch means" is "comprised of three distinct parts." Therefore, as with "path configuring means," the question becomes whether the claim recites sufficient structure, material, or acts to perform the recited function."

In the context of the *'154 patent*, the word "switch" itself does not connote sufficient structure to overcome the presumption that *§ 112*, P 6 applies. Unlike [*36] the district court cases cited by Mitchell, in *Overhead Door Corp. v. Chamberlin Group, Inc.*, the Federal Circuit held that "second switch means" was subject to *§ 112*, P 6 because "this claim element utilizes the term 'means' and the claim does not specify any structure or material for performing the recited function." *194 F.3d 1261, 1271 (Fed. Cir. 1999)*. The Federal Circuit did not find that the word "switch" provided sufficient structure to overcome the presumption that *§ 112*, P 6 applied.

Contrary to Mitchell's argument, [HN15] in deciding whether a particular limitation should be construed as a means-plus-function limitation or not, the issue is not solely whether a dictionary definition can be found for a term, but rather how a claim limitation should be construed in the manner intended by the drafter. Insofar as *§ 112*, P 6 is concerned, an applicant has a choice whether to invoke both the advantages and disadvantages of presenting means-plus-function limitations -- or not. An applicant signals an intent to invoke the advantages and disadvantages of *§ 112*, P 6 by using the word "means." Similarly, an applicant signals an intent not to invoke the advantages [*37] and disadvantages of *§ 112*, P 6 by not using the word "means." Although the presence or absence of the word "means" is not necessarily dispositive, the Federal Circuit, drawing on the foregoing rationale, has explained that the presence or absence of the word "means" creates a rebuttable presumption that *§ 112*, P 6 applies, or does not apply, respectively. The Federal Circuit has stressed that "[t] he use of the term 'means' is 'central to the analysis,' . . . because the term 'means,' particularly as used in the phrase 'means for,' is 'part of the classic template for functional claim elements,' . . . and has come to be closely associated with means-plus-function claiming." *Lighting World, 382 F.3d at 1358*. Accordingly, the Federal Circuit has labeled that presumption "a strong one that is not readily overcome." *Id.*

Here, the patentee has signaled that he intended to invoke *§ 112*, P 6 by using the word "means." As noted above, there are cases in which it is clear that "means" added nothing to a claim, and that the patent drafter was simply enamored with the word "means." *See e.g., Allen Eng'g, 299 F.3d at 1348*; *Cole, 102 F.3d at 531*. [*38] As also noted above, here the patentee chose to use the word "means" in connection with limitation [2] "a path configuring means," limitations [9] and [10], *i.e.*, "first" and "second" "switch means," and limitation [13] "means for causing. . . ." Thus, unlike cases such as *Allen Engineering* and *Cole*, the intrinsic record suggests that the drafter here chose selectively when to use -- and when not to use -- the word "means."

Thus, during prosecution, the patentee signaled his intention to invoke *§ 112*, P 6 by using the word "means," and in doing so created the aforementioned "strong" presumption. Although that presumption is certainly rebuttable, Mitchell has presented no persuasive reason why the patentee should not be held to that choice, especially given that "switch" has both structural and functional connotations and that the patentee most frequently used "switch" in a functional context.

Mitchell, relying on an IEEE Dictionary definition of "switch," urges that "switch" is defined as "a device for making, breaking or changing the connections in an electrical circuit." But Mitchell does not rely on that definition in urging its proposed claim construction. [*39] Rather, Mitchell urges that the "first switch means" and "second switch means" limitations should be construed as:

> The first switch means is a mechanism including one first part for connecting those circuits at one end of one path of the path configuring means to one distinct set of contacts and to disconnect those circuits from that one set of contacts. A second part of the mechanism acts by switching to connect those circuits at the end of a second path of the path configuring means to a second distinct set of contacts and to disconnect those circuits from that set. A third part of the mechanism acts by switching to connect those circuits at the end of a third such path of the path con-

> figuring means to a third distinct set of contacts and to disconnect those circuits from those contacts. Each part of the switch means connects and disconnects the memory address, data and control circuits of the path configuring means to or from one of the distinct sets of contacts.
>
> The second switch means is a mechanism to connect the dedicated memory address, data, and control lines of the path configuring means to the dedicated memory address, data, and control lines of the CPU respectively, [*40] and to disconnect those lines from each other.

Thus, Mitchell proposes an expansive, functional construction having little to do with the proffered definition of "switch."

[HN16] Claim construction is to resolve the disputed meaning of a term or phrase -- not an invitation for wholesale claim revision. Although it is recognized that Mitchell's functional description is patterned after Judge Illston's explanation of the function served by the "first" and "second" "switch means," the actual limitations of claim 1 simply provide:

> [9] first switch means comprised of at least three distinct parts for connecting said dedicated memory address, data, and control circuits of said path configuring means to each of said first three sets of contacts, and
>
> [10] second switch means for connecting said dedicated memory address, data, and control lines of said path configuring means to said dedicated memory address, data, and control lines of said CPU respectively.

That is, if Mitchell's argument that *§ 112*, P 6 should not apply was accepted, elements [9] and [10] would simply be viewed without the word "means."

Second, Mitchell does not address the situation where [*41] a term can have both structural and functional connotations and seems to assume that if a term has a structural connotation the presumption should be deemed rebutted because using "means" results in a narrower construction than if "means" is not used. That is not necessarily the case.

In *Overhead Door*, for example, although the term "switch" had a structural connotation, the Federal Circuit recognized that "switch" also has a functional connotation that potentially prevails when used with "means." *See 194 F.3d at 1271*. Moreover, *Overhead Door* illustrates that although "switch" may have a structural connotation as a noun, "switch" likewise has a functional connotation, and the structural connotation does not trump the patentee's choice to invoke *§ 112*, P 6 by using "switch means," at least where there is no evidence in the intrinsic record to the contrary. Mitchell has pointed to no such evidence.

Third, [HN17] the Federal Circuit has looked to the specification to determine whether a term has been used to define structure. *See Lighting World, 382 F.3d at 1361* ("it is clear that the parties in this case have used that term to denote structure. The [*42] written description of the [patent-in-suit], for example, uses the term 'connector assembly' as the name for structure."). Here, throughout the specification of the *'154 patent*, the most frequently used term is "switch means," rather than simply "switch." *See Col.* 19:53-60. The specification also explains that a "switch means" is a "switching device" under the control of the microcomputer. For example, the specification explains that "[t] he fifth switch means 112 is a switching device, under the control of the BICPU microcomputer, that can logically connect and logically disconnect the circuit between the common junction point and the 'B' bus circuits 128 . . .," Col. 20:44-49; "[t] he sixth switch means 114 is a switching device, under the control of the BICPU microcomputer, that can logically connect and logically disconnect the circuit between common junction point and the 'C' bus circuits 132 . . .," Col. 21:31-38. The specification thus indicates that the patentee did not use "switch" in "switch means" in a structural sense, but rather in a functional sense *(i.e., a* "means" for providing a "switch" function), and used another term, for example "switching device, [*43] " to refer to structure.

The patentee chose to use the word "means" thus signaling an intent to invoke *§ 112*, P 6. That raises the presumption that *§ 112*, P 6 applies. The term "switch" has both structural and functional connotations. If the patentee had wished to rely on the structural connotation, the patentee could have used "a switch," or a "switching device," or even a generic structural term, but did not. Rather, the patentee used "switch means," as he did throughout the specification, in a context indicating that "switch" was being used functionally, not structurally. Overall, Mitchell has not provided persuasive evidence that the presumption arising from using the term "means" has been rebutted. *Compare Interspiro USA Inc. v. Figgie Int'l Inc., 815 F. Supp. 1488, 1504 (D. Del. 1993), aff'd, 18 F.3d 927,930-31 (Fed. Cir. 1994)*(agreeing with the district court's construction of "detent means . . . for . . ." as a means-plus-function limitation), *with Greenberg,*

91 F.3d at 1584 (construing "detent mechanism" as defining structure, reasoning "[w] hile the language in the *Interspiro* case was in classic 'means-plus-function' [*44] format, the language in Dr. Greenberg's patent was not.").

Having concluded that the "first switch means" is a means-plus-function limitation governed by *§ 112*, P 6, the Court construes the function of the "first switch means" as "connecting said dedicated memory address, data, and control circuits of said path configuring means to each of said first three sets of contacts." *See Micro Chem. II, 194 F.3d at 1258.*

Judge Illston "construed" the function of the "first switch means" apparently due to a disagreement of the parties in which Mitchell was proposing a construction that did not differentiate between the "first" and "second" "switch means." *Maurice Mitchell v. Samsung Elecs. Co., Ltd.*, slip op. at 19-20. Intel has now proposed a construction of the "function" of the "first switch means" that is identical to Judge Illston's construction, but with an addition that Mitchell opposes. Mitchell, while contending that "first switch means" should not be construed under *§ 112*, P 6, has nevertheless proposed a construction that also substantively tracks Judge Illston's construction with minor changes, for example using "mechanism" rather than "means." To the extent [*45] that there was any previous disagreement as to the "three distinct parts," that disagreement no longer exists. Both Mitchell's and Intel's proposed constructions use the identical language.

[HN18] Claim construction is intended to resolve disputes between the parties on the meaning of claim terms and phrases. *See Vivid Techs., Inc. v. Am Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999)* (" [O] nly those [claim] terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy."). Because there is no longer any dispute between the parties there is no need for the Court to "construe" the "function" of limitation [9]. For the same reason, the Court rejects Intel's proffered addition to Judge Illston's construction.

Intel urges that the specification discloses no corresponding structure for performing the stated function. Judge Illston held the same. Mitchell, on the other hand, points to several places in the specification as allegedly disclosing such structure.

Intel suggests that this issue should be deferred to summary judgment. The Court agrees. The Federal Circuit has held that [HN19] whether sufficient structure is disclosed [*46] in a specification must be based on the understanding of one skilled in the art, and asserting that a means-plus-function limitation lacks structural support requires clear and convincing evidence because the consequence is invalidity. *See Creo Prods, Inc. v. Presstek, Inc., 305 F.3d 1337, 1347 (Fed. Cir. 2002)*; *Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1376-80 (Fed. Cir. 2001)*; *S3 Inc. v. nVIDIA Corp., 259 F.3d 1364, 1371 (Fed. Cir. 2001)*; *Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1382 (Fed. Cir. 1999)*. The Federal Circuit has further held that "corresponding structure" does not require a disclosure of specific circuitry. *Intel Corp. v. VIA Techs., Inc., 319 F.3d 1357, 1366-67 (Fed. Cir. 2003)*.

Accordingly, the issue of whether there is (or is not) "corresponding structure" disclosed in the specification for performing the claimed functions, and if so what that structure may be, is deferred to summary judgment proceedings.

"*second switch means for connecting said dedicated memory address, data, and control lines of said path configuring means to said dedicated memory* [*47] *address, data and control lines of said CPU respectively*"

The Court agrees with Intel that this limitation should be construed as a means-plus-function limitation under *35 U.S.C. § 112*, P 6. As with the "first switch means," Mitchell argues that "second switch means" should not be construed as a means-plus-function limitation under *§ 112*, P 6. Mitchell provides essentially the same arguments as it did in reference to "first switch means," except that here, Mitchell argues that the claim language identifies the location of the "second switch means" between the dedicated memory address, data, and control lines of the path configuring means and the dedicated memory address, data and control lines of the CPU. However, for the same reasons discussed above with regard to "first switch means," "second switch means" is construed as a means-plus-function limitation under *§ 112*, P 6.

Similarly, also for the same reasons discussed above, the Court declines to adopt the parties' proposed "constructions" of the stated function, as well as Intel's proposed additional language. The stated function of the "second switch means" is "connecting said dedicated memory address, [*48] data, and control lines of said path configuring means to said dedicated memory address, data and control lines of said CPU respectively."

Also for the reasons discussed above, the issue of whether there is (or is not) "corresponding structure" disclosed in the specification for performing the claimed function, and if so, what that structure is, is deferred to summary judgment proceedings.

"*wherein said first and second switch means assume a non signal-conducting state when said CPU power circuit is not supplied with power*"

The Court agrees with Mitchell and construes the term as, "the eleventh limitation describes a further function performed by the first and second switch means. When the CPU power circuit is not supplied with power, the switch means takes on a state in which no current or voltage may be conducted through the switch, and therefore a voltage representing a signal on a line connected to one side of the switch will not be affected by and will not affect a voltage representing a signal on a line connected to the other side of the switch. This also means that a voltage representing a signal on a line connected to the switch will not be transmitted through [*49] the switch." Intel's proposed construction is almost identical to Mitchell's except that Intel argues that the words "when" and "assume" should be construed and proposes additional language to construe the two words: "the 'assumption' of a non signal-conducting state occurs in response to, and continues as long as, the CPU power circuit is not supplied with power." Intel argues that the additional language will help the jury understand that "the claim requires the assumption of the non signal-conducting state to be a response to . . . the moment when the CPU gains power and sends an 'appropriate' signal to the 'switch means.'" Intel argues that "the purpose of the eleventh limitation is to isolate the elements of the system from each other in the event the CPU is damaged and to remain in that isolated state until receipt of an appropriate signal from the CPU." *See* Col. 3:5-13; Col. 42:47-53; Cols. 43:65-44:20.

The additional language proposed by Intel is not supported by the claim language and is not necessary. Furthermore, this additional language was not included in Judge Illston's construction. Accordingly, Intel's proposed addition language is not included in the Court's construction [*50] of the limitation.

"*wherein said lines of said CPU and said contacts assume a non signal-conducting state when said first and second switch means are in said non signal-conducting state*"

The Court agrees with Mitchell and construes the term as, "the dedicated memory address data, and control lines of the CPU and the dedicated memory address, data and control lines of each of the three sets of contacts assume a non signal-conducting state when the first and second switch means are in a non signal-conducting state. Accordingly, those lines take on a state in which no current or voltage may be conducted through them, and voltages representing signals on the lines may not be transmitted along the lines, whenever the first and second switch means are also in this state." Again, Intel's proposed construction is nearly identical to Mitchell's except that Intel argues that the words "assume" and "when" should be construed and proposes additional language that states, "the 'assumption' of a non signal-conducting state by the lines and contacts occur in response to, and continues as long as, the first and second 'switch means' are in a non signal-conducting state," to accomplish [*51] this goal.

For the same reasons discussed above with regard to the eleventh limitation, Intel's additional language is rejected and the Court construes the term consistently with Judge Illston's construction.

"*means for causing said first and second switch means to remain in said non signal-conducting state upon application of power to said CPU power circuit and to assume a signal conductive state upon receipt of an appropriate signal from said CPU and to*"

and

"*assume a non signal-conducting state upon receipt of an appropriate signal from said CPU*

The Court and the parties agree that these limitations should be construed as means-plus-function limitations under *35 U.S.C. § 112*, P 6.

Intel and Mitchell have proposed "constructions" of the stated functions that are substantively identical, except that Intel has proposed additional language. The "constructions" that the parties propose -- like the proposed constructions in connection with the "first" and "second" "switch means" limitations above -- go far beyond the actual language of the claim. As discussed above, in identifying the stated function, the Court is constrained to [*52] the actual language of the claim. Also, there does not appear to be any dispute between the parties as to the meaning of the claim language -- except, again, that Intel proposes adding an additional two sentences, which Mitchell opposes.

Accordingly, the Court concludes that the stated functions are: (1) "causing said first and second switch means to remain in said non signal-conducting state upon application of power to said CPU power circuit and to assume a signal-conductive state upon receipt of an appropriate signal from said CPU," and (2) "assume a non signal-conducting state upon receipt of an appropriate signal from said CPU."

The Court agrees with Intel and identifies the corresponding structure as, "to the extent that any structure for the corresponding function of the thirteenth and fourteenth limitations is provided in the specification, that structure is described at col. 24:67 -- col. 25:56." Mitchell agrees that the limitation should be construed as a means-plus-function limitation under *§ 112*, P 6 but does not provide a proposed structure in its Opening Brief or in the Joint Claim Construction Chart. Mitchell appears to object to Intel's proposed structure in its [*53] Opening Brief but offers no support for its objection.

Intel's proposed structure is identical to the structure identified by Judge Illston in her Claim Construction Order. Accordingly, and because Mitchell fails to provide an alternative structure, the Court identifies the corresponding structure consistent with Judge Illston's Claim Construction Order.

CONCLUSION

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court's claim interpretations are set forth in a table as Appendix B. The claims with the disputed terms in bold are set forth in Appendix A.

So ORDERED and SIGNED this 21st day of June, 2006.

LEONARD DAVIS

UNITED STATES DISTRICT JUDGE

ATTACHMENT

APPENDIX A

1. A microcomputer data processing apparatus, comprising:

[1] a Central Processing Unit (CPU),

[2] a **path configuring means**,

[3] path control circuits connecting said CPU to said path configuring means,

[4] a plurality of contacts comprised of a plurality of distinct sets,

[5] wherein said CPU further comprises a dedicated memory address circuit, a [*54] dedicated memory data circuit, a dedicated memory control circuit and a dedicated power circuit,

[6] wherein said path configuring means further comprises a dedicated memory address circuit, a dedicated memory data circuit and a dedicated memory control circuit,

[7] wherein each said dedicated memory address, data, and control circuit includes a plurality of dedicated memory address, data, and control lines respectively,

[8] wherein said memory control lines are comprised of a read/write line, timing lines and status lines,

[9] **first switch means comprised of at least three distinct parts for connecting said dedicated memory address, data, and control circuits of said path configuring means to each of said first three sets of contacts**, and

[10] **second switch means for connecting said dedicated memory address, data, and control lines of said path configuring means to said dedicated memory address, data, and control lines of said CPU respectively.**

[11] **wherein said first and second switch means assume a non signal-conducting state when said CPU power circuit is not supplied with power,**

[12] **wherein said lines of said** [*55] **CPU and said contacts assume a non-signal conducting state when said first and second switch means are in said non-signal conducting state,**

[13] **means for causing said first and second switch means to remain in said non signal-conducting state upon application of power to said CPU power circuit and to assume a signal-conductive state upon receipt of an appropriate signal from said CPU, and to**

[14] **assume a non signal-conducting state upon receipt of an appropriate signal from said CPU.**

APPENDIX B

CLAIM CONSTRUCTION FOR U.S. PATENT NO. 4,875,154	
Claim Language	Court's Construction
a microcomputer	A single microcomputer, which includes, at the least, a
data	
processing apparatus,	microprocessor, storage (e.g. memory) and
comprising:	input/output device

CLAIM CONSTRUCTION FOR U.S. PATENT NO. 4,875,154	
Claim Language	Court's Construction
	enabling the system to perform operations
	on data, which
	comprises what is set forth in the claim.
a Central	The unit of a computing system having the circuits that
Processing Unit	control the interpretation of instructions
(CPU)	and their execution.
	A CPU
	includes, at least, an arithmetic logic unit
	and associated
	registers.
a path configuring	Function: Path configuring
means,	
	Structure: The structure described
	in the specification for
	performing the path configuring function is a
	structure having
	the first through fifth internal buses, the
	junction,and the third
	through seventh switch means arranged
	as shown in Switching
	Unit 100 of Figure 1 and described
	in the specification. The
	dedicated memory, address, data, and
	control circuits of the
	path configuring means as required in
	the sixth limitation, are
	the circuits that make up those internal buses,
	junction, and switch means.
	As required in the seventh limitation,
	each such dedicated memory
	address, data, and control circuit
	includes a plurality of
	dedicated memory address, data,
	and control lines.
path control	Circuits that physically connect the CPU to the path
circuits	configuring means, and that operate on input
connecting said CPU	signals from the
to said	CPU and generate appropriate output signals to control
path configuring means	the path
	configuring means, and thereby create the
	path for memory address, data and control
	signals to follow along various
	alternative possible paths.
a plurality of	A plurality of physically distinguishable sets (that
	is,
contacts	collections) of electrical contacts with each set

CLAIM CONSTRUCTION FOR U.S. PATENT NO. 4,875,154	
Claim Language	Court's Construction
comprised of a	(or collection)
plurality of	
distinct sets	having contacts for memory address, data, and
	control signals.
	A "contact" is a conductor, such as a pad of
	metal on a semiconductor chip or a pin, for
	physically connecting with
	another such conductor to permit current
	to flow between the
	two conductors.
wherein said CPU	The CPU contains four circuits. A "circuit"
further	means an arrangement of electronic
comprises a dedicated	components interconnected by lines
memory address	that has at least one input and one
circuit, a	output terminal, and whose
dedicated memory data	purpose is to produce at the
circuit, a dedicated	output terminal a signal that is a
memory	function of the signal at the input terminal.
control circuit and a	A "circuit" is not a
dedicated power	line. A "dedicated" circuit means a
circuit	circuit that provides a clear
	unbroken communications path from
	one station to another and
	that is always available for use. A "dedicated
	memory" circuit
	means a circuit that is always available
	for the purpose of transmitting
	signals between the CPU and memory. "Memory"
	means the addressable storage in which
	instructions and other
	data are stored and retrieved for execution
	and processing. A "dedicated power
	circuit" means a circuit that is always
	available to provide power to the CPU.
	One of the four circuits
	is a "dedicated memory address circuit"
	meaning a circuit that
	is always available to transmit signals
	representing memory addresses
	between the CPU and memory. Another is "a
	dedicated memory data circuit" meaning
	a circuit that is always available to transmit
	signals representing data for
	storage in memory between the
	CPU and memory. Another is "a dedicated memory
	control circuit," meaning a circuit
	that is always available to
	carry signals representing memory
	control functions between the CPU and memory.

CLAIM CONSTRUCTION FOR U.S. PATENT NO. 4,875,154	
Claim Language	Court's Construction
wherein said path	The path configuring means contains three types
configuring means	of circuits.
further	One is a "dedicated memory address circuit,"
comprises a dedicated	meaning a circuit
memory address	that is always available to transmit
circuit, a	signals representing
dedicated memory data	memory addresses to memory. Another is "a dedicated
circuit and a	memory data circuit," meaning a
dedicated	circuit that is always available
memory control	to transmit signals representing data to or from
	memory.
circuit	Another is "a dedicated memory control
	circuit," meaning a
	circuit that is always available to transmit
	signals representing
	memory control functions to or from memory.
wherein each said	Each dedicated memory address circuit
dedicated	of the CPU and the path
memory address, data	configuring means has a plurality of
and	dedicated memory address
control circuit	lines. Each dedicated memory data
includes a	circuit of the CPU and the
plurality of dedicated	path configuring means has a
memory address, data,	plurality of dedicated memory
and	data lines. Each dedicated memory control
control lines	circuit of the CPU
respectively	and the path configuring means has a
	plurality of dedicated
	memory control lines. A "line" is a conductor
	that may be used to carry a signal.
wherein said memory	The dedicated memory control lines of the CPU and path
control lines	configuring means include a single line that
are comprised	carries read and
of a read /-write	write signals, a plurality of memory lines
line,	that carry timing
timing lines and	signals, and a plurality of memory lines that
status lines	carry status signals.
first switch means	Function: For connecting said dedicated memory address,
comprised of at least	data, and control circuits of said path configuring
three	means to
distinct parts for	each of said first three sets of contacts
connecting	Structure: Deferred to summary judgment proceedings
said dedicated memory	
address, data,	
and control	
circuits of said path	
configuring means to	

CLAIM CONSTRUCTION FOR U.S. PATENT NO. 4,875,154	
Claim Language	Court's Construction
each	
of said first three	
sets of	
contacts	
second switch means	Function: For connecting said dedicated memory
for	
address,connecting	data, and control lines of said path
said	
dedicated	configuring means to said
memory address, data,	dedicated memory address, data, and control
and	lines of said CPU
control lines of said	path
configuring means to	respectively.
said	Structure: Deferred to summary judgment proceedings
dedicated memory	
address,	
data, and control	
lines of	
said CPU	
respectively	
wherein said first and	The eleventh limitation describes a
second switch means	further function performed
assume a non signal-	by the first and second switch means. When the CPU
	power
conducting state when	circuit is not supplied with power, the switch
said	means takes on a
CPU power circuit is	state in which no current or voltage may be
not	conducted through
supplied with power	the switch, and therefore a voltage representing
	a signal on a
	line connected to one side of the switch will
	not be affected by
	and will not affect a voltage representing
	a signal on a line
	connected to the other side of the switch.
	This also means that
	a voltage representing a signal on a line
	connected to the switch
	will not be transmitted through the switch.
wherein said lines	The dedicated memory address data, and
of said	control lines of the CPU and the dedicated memory
CPU and said contacts	address, data and control lines
assume a non signal-	of each of the three sets of contacts assume
conducting state when	a non signal --
said	conducting state when the first and
first and second	second switch means are in
switch means are-	a non signal-conducting state. Accordingly,
in said non signal	those lines take on

CLAIM CONSTRUCTION FOR U.S. PATENT NO. 4,875,154	
Claim Language	Court's Construction
conducting state	a state in which no current or voltage
	may be conducted through them, and voltages
	representing signals on the lines
	may not be transmitted along the lines,
	whenever the first and
	second switch means are also in this state.
means for causing	Function: (1) Causing said first and second
said first	switch means to remain in said non signal-conducting
and second switch	state upon application of
means to	power to said CPU power circuit and to assume a signal
remain in said	conductive state upon receipt of an appropriate
non signal-	signal from said
conducting state upon	CPU.
application of power	
to said	
CPU power circuit and to	
assume a signal	
conductive state	
upon receipt of an	(2) Assume a non-signal conducting state
appropriate signal	upon receipt of an
from said	appropriate signal from said CPU.
CPU and to	
and	
	Structure: To the extent that any structure for the
assume a non signal-	corresponding function of the thirteenth and fourteenth
conducting state upon	limitations is provided in the specification,
receipt of an	that structure is
appropriate signal	described at col. 24:67 -- col. 25:56.
from said CPU.	

[*56]

EXHIBIT C

LEXSEE 2001 U.S. DIST. LEXIS 25641

Caution
As of: Jun 26, 2007

ATMEL CORPORATION, Plaintiff, v. SILICON STORAGE TECHNOLOGY, INC., Defendant.

No. C 96-0039 SC

UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA

2001 U.S. Dist. LEXIS 25641

June 20, 2001, Decided
June 20, 2001, Filed; June 20, 2001, Entered in Civil Docket

SUBSEQUENT HISTORY: Summary judgment denied by, Motion to strike denied by *Atmel Corp. v. Silicon Storage Tech., 2001 U.S. Dist. LEXIS 25640 (N.D. Cal., June 22, 2001)*

DISPOSITION: [*1] Atmel's Motion for Summary Judgment of Infringement of *'811* and *'829 Patents* denied.

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiff patent holder sued defendant semiconductor chip manufacturer, alleging that the manufacturer's flash memory devices infringed two patents related to electronically erasable programmable read only memory on semiconductor chips. The patent holder moved for summary judgment.

OVERVIEW: The manufacturer was not collaterally estopped from seeking a new claim construction as it was not a party to the litigation in which the patent claims had been construed. However, the court was not required to ignore that previous construction. The patent holder was not entitled to summary judgment because it failed to show that the accused product literally infringed the patents or infringed under the doctrine of equivalents. Specifically, a line on the accused product was not a "conductive line having an inherent distributive capacitance" and was not equivalent to a line on the patented circuits because unlike the disclosed lines, it was a very short line internal to the charge-pump circuitry. Moreover, the lines in the accused device transferred continuous voltage, rather than increments of charge, and therefore the function of those devices was not identical to the function of the devices in the patented circuit. The transfer means on the accused product was not equivalent structure to the transfer means on the patented circuits because it did not operate to combine the hv voltage with the pulse voltage and then transfer the combined voltage to the selected line.

OUTCOME: The motion for summary judgment was denied.

LexisNexis(R) Headnotes

Civil Procedure > Summary Judgment > Standards > Genuine Disputes
Civil Procedure > Summary Judgment > Standards > Materiality
[HN1] Summary judgment is proper only when there is no genuine issue of material fact and, when viewing the evidence in the light most favorable to the nonmoving party, the movant is clearly entitled to prevail as a matter of law. *Fed. R. Civ. P. 56(c).*

Civil Procedure > Summary Judgment > Burdens of Production & Proof > General Overview
Civil Procedure > Summary Judgment > Standards > Genuine Disputes
[HN2] Once a summary judgment motion is made and properly supported, the nonmoving party may not rest on

the mere allegations of its pleadings, but must set forth specific facts showing that there is a genuine issue for trial. *Fed R. Civ. P. 56(e)*. The court is not to make findings of fact, but to perform the threshold inquiry to determine whether there exists any genuine factual issues that properly can be resolved only by a finder of fact because they may reasonably be in favor of either party.

Civil Procedure > Summary Judgment > Burdens of Production & Proof > Implausible Claims
Civil Procedure > Summary Judgment > Burdens of Production & Proof > Nonmovants
[HN3] In the context of a summary judgment motion, if the factual context makes the nonmoving party's claim implausible, that party must come forward with more persuasive evidence than would otherwise be necessary to show that there is a genuine issue for trial. Moreover, if the nonmoving party has the burden of proof on a given issue, the moving party can prevail by demonstrating that there is an absence of evidence to support the nonmoving party's case.

Patent Law > Claims & Specifications > Claim Language > Combination Claims
Patent Law > Claims & Specifications > Description Requirement > General Overview
Patent Law > Inequitable Conduct > General Overview
[HN4] Under *35 U.S.C.S. § 112*, para. 6, an element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof. A claim with a means-plus-function element shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. *35 U.S.C.S. § 112*. The scope of such a claim is confined to the structures expressly disclosed in the specification and corresponding equivalents. The process of construing means-plus-function elements requires two steps. First, the function called for in the claim element must be construed. Second, the corresponding structures disclosed in the patent specification for performing that function must be identified.

Patent Law > Inequitable Conduct > Effect, Materiality & Scienter > General Overview
Patent Law > Infringement Actions > Claim Interpretation > Fact & Law Issues
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
[HN5] Once the court has construed the means-plus-function limitations as a matter of law, the finder of fact generally applies the properly construed patent claim to the accused device. Literal infringement requires that the accused device perform the identical function as specified in the claim and employ identical or equivalent structures, material, or acts as described in the specification. A structure is an equivalent if there is only an insubstantial change which adds nothing of significance to the structure, materials, or acts disclosed in the patent specification.

Copyright Law > Civil Infringement Actions > Elements > Substantial Similarity > General Overview
Patent Law > Claims & Specifications > Description Requirement > General Overview
Patent Law > Infringement Actions > Doctrine of Equivalents > General Overview
[HN6] Despite the equivalents language in *35 U.S.C.S. § 112*, para. 6, literal infringement under *§ 112*, para. 6 is not co-extensive with the doctrine of equivalents. Rather equivalents under *35 U.S.C.S. § 112* is an application of the doctrine of equivalents in a restrictive role, narrowing the application of broad literal claims elements. The doctrine of equivalents requires each claim element to be met by an equivalent element in the accused device. To infringe a means-plus-function element, the accused device must perform a substantially similar function as disclosed in the patent claim, and consist of the same or a substantially similar structure to perform that function. Equivalence is shown by evidence that the accused device contains an element that is not substantially different from any claim element that is literally lacking, or that the claimed limitation and the accused component perform "substantially the same function in substantially the same way to achieve substantially the same result. Equivalence under the doctrine of equivalents is therefore similar to equivalents under *35 U.S.C.S. § 112*, para. 6.

Patent Law > Infringement Actions > Doctrine of Equivalents > Elements > General Overview
Patent Law > Infringement Actions > Infringing Acts > General Overview
[HN7] Literal infringement, as a restrictive application of the doctrine of equivalents, requires identical functions while the doctrine of equivalents requires equivalent functions. Both theories of patent infringement employ essentially the same test for determining whether the structures to perform the function(s) are equivalent. As a result, finding the lack of an equivalent structure under *35 U.S.C.S. § 112*, para. 6 will usually preclude a finding of equivalence under the doctrine of equivalents.

Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
[HN8] Collateral estoppel, also referred to as issue preclusion, prevents a party from relitigating issues that it litigated and lost in a prior suit. The underlying rationale for the doctrine is that a party who has litigated an issue and lost should be bound by that decision and can not demand that the issue be decided over again. In order for a party to be collaterally estopped, the issue must be identical, actually litigated, and essential to a final judgment in the first action. Id. In addition, the party against whom estoppel is applied must have had a full and fair opportunity to litigate the issue in the first action.

Patent Law > Claims & Specifications > Claim Language > Combination Claims
Patent Law > Infringement Actions > Claim Interpretation > Means Plus Function
Patent Law > Infringement Actions > Infringing Acts > General Overview
[HN9] In the context of interpreting a patent claim, a means can include a combination of structures. *35 U.S.C.S. § 112*, para. 6.

Patent Law > Infringement Actions > Burdens of Proof
[HN10] The patentee has the burden of proving particularized testimony and linking argument as to the insubstantiality of the differences between the claimed invention and the accused device.

Patent Law > Infringement Actions > Doctrine of Equivalents > General Overview
[HN11] Unlike literal infringement of a patent, the doctrine of equivalents requires the functions be equivalent, rather than identical. A function is considered equivalent if it does not make a significant impact on the operation of the device.

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JUDGES: SAMUEL CONTI, UNITED STATES DISTRICT JUDGE.

OPINION BY: SAMUEL CONTI

OPINION

ORDER DENYING PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT ON INFRINGEMENT OF U.S. *PATENTS '811* AND *'829*

In this action, Plaintiff Atmel Corporation ("Atmel") alleges that products manufactured by Defendant Silicon Storage Technology ("SST") infringe on five U.S. Patents, including inter alia *Patent Nos. 4,511,811* and*4,673,829*. Presently before the Court is Plaintiff's motion for summary judgment on whether SST's Flash memory devices, specifically SST's cp12 circuit, infringes the*'811* and *'829* patents.

I. BACKGROUND

In light of the extensive and lengthy litigation over the *'811* and *'829* patents since the case began five years ago, the Court undertakes a brief review of the relevant factual and procedural history.

A. Background Facts

The *'811* and *'829* patents relate to electronically erasable programmable read only memory (EEPROM) on semiconductor chips. A [*3] typical EEPROM device is composed of an array of memory cells and circuitry which is dedicated to writing, erasing, or reading information stored in specific cells. In order to program or erase designated memory cells, the EEPROM circuit must increase the voltage on a selected conductive line to a relatively high voltage of approximately 12 to 15V. [1]

Traditionally, a power supply located off-chip provided the additional power needed to perform the program and erase operations. In order to reduce cost, size, and weight, it is preferable to generate the required high voltage on-chip from the primary low voltage power supply. The disadvantage is that on-chip EEPROM devices are subject to voltage leaking from the on-chip power supply through the large number of unselected lines.

1 A typical semiconductor device requires a lower voltage power supply of approximately 5V.

The '811 patent blocks this leakage through the use of a novel switching means. The circuit described in the '811 patent transfers charge in successive [*4] discrete increments from an on-chip, high voltage generating circuit to the selected conductive line while blocking leakage to the unselected lines. The sole claim of the *'811* patent reads: [2]

> An apparatus for selectively increasing the voltage on one or more of a plurality of conductive lines having inherent distributed capacitance disposed in a semiconductor circuit comprising:
>
> - means disposed on said semiconductor circuit for selecting one or more of said conductive lines;
>
> - high voltage generating means disposed on said semi-conductor circuit for generating a high voltage from a lower voltage power supply connected to said semiconductor circuit;
>
> - voltage plus generating means disposed on said semiconductor circuit for generating voltage pulses;
>
> - means for capacitively coupling voltage pulses from said voltage pulse generating means to a voltage node in said semiconductor circuit;
>
> - transfer means responsive to said selecting means and connected to said voltage node for transferring increments of charge from said high voltage generating means to the inherent distributed capacitance in selected ones of said conductive lines in response to said voltage [*5] pulses;
>
> - said transfer means including switching means cooperating with said selecting means for blocking substantially all of the flow of current through and transfer of charge from said high voltage generating means to said conductive lines which are unselected.

Figure 1 is the circuit disclosed in the *'811* patent.

Figure 1.

[SEE FIGURE IN ORIGINAL]

In the '811 circuit, line 8 is the "conductive line with inherent distributed capacitance" on which the voltage will be increased. The selecting, charging, and deselecting process occurs in the following manner. The NOR pre-decoder [10] and post-decoder [20] select line 8 by charging it with an initial voltage of 4 volts (Vcc). The gate of transistor 44, which is also charged to 4 volts, then pulls voltage from the "High Voltage Generator Circuit" to its source, charging node 42 to 3 volts (Vcc-V) and turning device 44 on. When the oscillator generates a voltage pulse, device 44 couples the voltage pulse with the existing voltage so that node 42 is at 5.3 volts. Device 46 turns on and device 40 turns off, resulting in the transfer of 0.3 volts from node 42 to line 8. The oscillator then turns off, [*6] lowering the voltage on device 44 and at node 42 to 3.3 volts. Since the voltage at the gate of device 40 is higher than the voltage at the source by the threshold amount, device 40 turns back on, device 46 turns off and the "charge pump" cycle repeats itself until the desired voltage on line 8 is achieved. When line 8 is unselected, transistor 24 is on, holding line 8 to ground. With line 8 at ground, transistor 40 is held off, and voltage can not leak to the unselected lines.

2 The single claim of the *'829* patent is identical to Claim 1 of the *'811* patent except that the '829

requires: (1) the "high voltage generating means" to be switchable; (2) the "voltage pulse generating means" to be switchable; and (3) a means for enabling the two switchable elements.

SST manufactures EEPROM circuits that also charge a selected line while preventing leakage to unselected lines, and Atmel contends that SST's cp12 circuit infringes on the *'811* and *'829* patents. Figure 2 depicts SST's cp12 circuit. [3]

Figure 2. [*7]

[SEE FIGURE IN ORIGINAL]

The SST circuit is a "dual-pump" system in which there are two copies of the charge pump circuitry, rather than one. In the SST circuit, a NAND predecoder (not depicted) selects line s0, [4] charging it with an initial voltage of 4 volts. This initial voltage also passes through NH5 to charge N1, plus the gates of NH9 and NH11. The initial charge also passes through NH6 and appears at the gates of NH7 and NH8. [5] The oscillator ("clk"), which is referred to as a "clock" in the SST circuit, then delivers a voltage pulse of 5 volts which NH12 couples to the voltage on [4] for a total of 9 volts. [6] NH7 turns on and NH7 transfers an increment of voltage to line N1, raising the voltage on N1 to 8V and turning NH5 and NH6 off. The charge-pump process repeats through the upper and lower charge pump circuitry to transfer increments of charge to N1. The 8 volts on N1 also cause NH9, a source follower, to pull voltage from the high voltage generating means [hv] to line s0. The voltage on line s0 is increased to 7 volts. As the voltage at NH9's gate increases by the operation of the charge pump, the source voltage and voltage of line s0 follow the voltage at [*8] NH9's gate less one threshold until the desired high voltage is achieved.

3 The Court follows the schematic of the cp12 circuit as submitted on page 5 of the Declaration of Marvin White in Support of Atmel's Motion for Summary Judgment. This diagram differs slightly from animated illustration of the cp12 circuit submitted by SST as Exh. A of its Supplemental Response. The differences between the two depictions are: (1) the animated illustration does not have an interconnect line between node 2 and node 4; (2) the animated illustration includes the selecting means circuitry; and (3) the nodes are labeled differently.

4 The Court follows the parties' use of the term "line s0" to include the y-line s0 as well as the word lines w10 and w11.

5 In the animated illustration, the absence of the interconnect line prevents the initial voltage from appearing at the gate of NH8.

6 Atmel's description of the operation of the cp12 circuit differs slight in that Atmel's expert, Marvin White, states that the upper charge-pump delivers the first voltage pulse. (White Decl. PP26-29). This discrepancy does not affect the Court's infringement analysis.

[*9] **B. Procedural History**

The present litigation commenced on January 3, 1996. Atmel moved for summary judgment on the issue of infringement, and on June 25, 1997, the Court found that the cp12 circuit read on four of the *'811* patent's elements: the high voltage generating means; the voltage pulse generating means; the means for capacitively coupling, and the switching means. (Order dated June 25, 1997, ("SJ Order # 1")). The Court denied summary judgment finding genuine issues of material fact existed as to what constituted a conductive line, the means for selecting, and the equivalency of the transfer means in the accused device. (SJ Order # 1 at 16-21, 25-27). Subsequently, Atmel made a second motion for summary judgment on infringement. In the absence of evidence to the contrary, the Court held the selecting means structures in the SST device to be equivalent to the selecting means disclosed in the *'811* patent. (Order, dated January 6, 1998, at 12-13 ("SJ Order # 2")). The Court denied summary judgment on the grounds that a triable issue existed as to whether the cp12 circuit contained a transfer means responsive to the selecting means and whether the addition of NH9 and NH5 [*10] render the cp12 circuit substantially different from the '811 circuit. (SJ Order # 2, at 12-13.)

Concurrent with the present case, Atmel brought a separate action against Information Storage Devices ("ISD") alleging that ISD's products also infringed the *'811* and *'829* patents. Atmel v. ISD, Case No. C95-1987 (N.D. Cal.) ("the ISD case"). On April 13, 1998, Judge Fern Smith found the *'811* and the *'829* patents invalid. This Court then granted summary judgment in SST's favor based on the invalidity ruling in the ISD case. (Order, dated August 4, 1998 (SJ Order # 3). Atmel then appealed the ISD ruling to the Federal Circuit, and this Court partially stayed the present case pending appeal. The Federal Circuit reversed and remanded Judge Smith's ruling, and the ISD case was subsequently reassigned to this Court. This Court then held a Markman hearing in the ISD case, and on July 24, 2000, the Court issued an Order Construing Claim 1 of the *'811* patent. ("CC Order"). Atmel and ISD subsequently settled.

Atmel also initiated an investigation before the U.S. International Trade Commission ("ITC") against certain semiconductor manufacturers alleging they were infringing [*11] on the *'811* and *'829* patents. SST intervened in the ITC proceeding. On October 16, 2000, the ITC issued its Final Determination finding that the SST circuitry does not infringe on the *'811* and *'829* patents. (DeBruine Decl. in Opp., Exh. 4 at 4 (Notice of Final Determination in ITC action ("ITC Final Order"))).

The parties did not litigate the present case from the issuance of the stay in November 1998 until January 2001. On June 1, 2001, Atmel moved for summary judgment of infringement of the *'811* and *'829* patents.

II. LEGAL STANDARD

A. Summary Judgment

[HN1] Summary judgment is proper only when there is no genuine issue of material fact and, when viewing the evidence in the light most favorable to the nonmoving party, the movant is clearly entitled to prevail as a matter of law. See *Fed. R. Civ. P. 56(c)*; *Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 250, 91 L. Ed. 2d 202, 106 S. Ct. 2505 (1986)*; *Cleary v. News Corp., 30 F.3d 1255, 1259 (9th Cir. 1994)*. [HN2] Once a summary judgment motion is made and properly supported, the nonmoving party may not rest on the mere allegations of its pleadings, but must set [*12] forth specific facts showing that there is a genuine issue for trial. See *Fed R. Civ. P. 56(e)*; *Celotex Corp. v. Catrett, 477 U.S. 317, 322, 91 L. Ed. 2d 265, 106 S. Ct. 2548 (1986)*. The court is not to make findings of fact, but to perform the threshold inquiry to determine whether there exists any "genuine factual issues that properly can be resolved only by a finder of fact because they may reasonably be in favor of either party." *Anderson, 477 U.S. at 250*.

[HN3] If the factual context makes the nonmoving party's claim implausible, that party must come forward with more persuasive evidence than would otherwise be necessary to show that there is a genuine issue for trial. See *Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 587, 89 L. Ed. 2d 538, 106 S. Ct. 1348 (1986)*. Moreover, if the nonmoving party has the burden of proof on a given issue, the moving party can prevail by demonstrating "that there is an absence of evidence to support the nonmoving party's case." *Celotex, 477 U.S. at 325*.

B. Patent Infringement

1. Literal Infringement under 35 U.S.C. § 112 [*13] *P6.*

[HN4] *Section 112* P6 of Title 35 provides that "an element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof." A claim with a means-plus-function element "shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." *35 U.S.C. § 112*. The scope of such a claim "is confined to the structures expressly disclosed in the specification and corresponding equivalents." *Symbol Tech., Inc. v. Opticon, Inc., 935 F.2d 1569, 1575 (Fed. Cir. 1991)*. The process of construing means-plus-function elements requires two steps. First, the function called for in the claim element must be construed. Second, the "corresponding structures" disclosed in the patent specification for performing that function must be identified. See *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1308 (Fed. Cir. 1998)*.

[HN5] Once the court has construed the means-plus-function limitations as a matter of law, the finder of fact generally applies the properly [*14] construed claim to the accused device. *General Am. Transportation Corp. v. Cryo-Trans, Inc., 93 F.3d 766, 769 (Fed. Cir. 1996)*; but see, *Chiuminatta, 145 F.3d at 1309* (stating that "whether a determination of equivalents under *§ 112*, para. 6 is a question of law or fact" was expressly left open in Markman). Literal infringement requires that the accused device perform the identical function as specified in the claim and employ identical or equivalent structures, material, or acts as described in the specification. *Valmont Industries, Inc. v. Reinke Manufacturing Co., Inc., 983 F.2d 1039, 1042 (Fed. Cir. 1993)*. A structure is an "equivalent" if there is only an "insubstantial change which adds nothing of significance to the structure, materials, or acts disclosed in the patent specification." *Valmont, 983 F.2d at 1043*.

2. Infringement under Doctrine of Equivalents

[HN6] Despite the "equivalents" language in *§ 112* P6, literal infringement under *§ 112* P6 is not coextensive with the doctrine of equivalents. *Chiuminatta, 145 F.3d at 1310*. Rather equivalents under *§ 112* is "an application [*15] of the doctrine of equivalents in a restrictive role, narrowing the application of broad literal claims elements." *Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 28, 137 L. Ed. 2d 146, 117 S. Ct. 1040 (1997)*. The doctrine of equivalents requires each claim element to be met by an equivalent element in the accused device. *Chiuminatta, 145 F.3d at 1311*. To infringe a means-plus-function element, the accused device must perform a substantially similar function as disclosed in the patent claim, and consist of the same or a substantially similar structure to perform that function. *Id. at 1310-11*. Equivalence is shown by evidence that the accused device contains an element that is not "sub-

stantially different" from any claim element that is literally lacking, see *Warner-Jenkinson, 520 U.S. at 40*, or that the claimed limitation and the accused component perform "substantially the same function in substantially the same way to achieve substantially the same result," see *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 149 F.3d 1309, 1321 (Fed. Cir. 1998)*. Equivalence under the DOE is therefore similar [*16] to equivalents under *§ 112* P6. See *Chiuminatta, 145 F.3d. at 1310*. In Chiuminatta, the Federal Circuit clarified the relationship between literal infringement and the doctrine of equivalents in means-plus-function elements. [HN7] Literal infringement, as a restrictive application of the doctrine of equivalents, requires identical functions while the doctrine of equivalents requires equivalent functions. Both theories of infringement employ essentially the same test for determining whether the structures to perform the function(s) are equivalent. *Id. at 1310-1311*. As a result, finding the lack of an equivalent structure under *§ 112*-6 will usually preclude a finding of equivalence under the doctrine of equivalents. *Id. at 1310.* [7]

7 The exception is when the accused device is a variant based on new technology that could not have been disclosed in the patent. Under such circumstances, the doctrine of equivalents is necessary. *Id. at 1310.*

[*17] **III. DISCUSSION**

A. Collateral Estoppel/Issue Preclusion

Before discussing the substantive issue of infringement, it is necessary to address whether the Court may apply the claim construction from the ISD case in the present action. Atmel urges the Court to at least presumptively apply the ISD claim construction, while SST argues that the construction can not apply to it because the collateral estoppel requirements are not met.

[HN8] Collateral estoppel, also referred to as issue preclusion, prevents a party from relitigating issues that it litigated and lost in a prior suit. *In re Freeman, 30 F.3d 1459, 1465 (Fed. Cir. 1994)*. The underlying rationale for the doctrine is "that a party who has litigated an issue and lost should be bound by that decision and can not demand that the issue be decided over again." *Id.* (citing *Mother's Restaurant Inc. v. Mama's Pizza, Inc., 723 F.2d 1566, 1569 (Fed. Cir. 1983))*. In order for a party to be collaterally estopped, the issue must be identical, actually litigated, and essential to a final judgment in the first action.*Id.* In addition, the party against whom estoppel is applied must [*18] have had a full and fair opportunity to litigate the issue in the first action. *Id.*

The first three requirements are easily satisfied. First, the issue is identical as both cases require the construction of each limitation of claim one of the *'811* patent. Second, the scope and meaning of the claim was vigorously and actually litigated during the Court's extensive Markman hearing, which resulted in the issuance of a comprehensive claim construction. Third, after *Markman v. Westview Instruments, Inc., 517 U.S. 370, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996)*, at least one court has found claim construction to be an essential and final ruling entitled preclusive effect, when the patent holder settled after the claim construction. See, e.g., *TM Patents v. International Business Machines, 72 F. Supp. 2d 370, 377 (S.D.N.Y. 1999)*; see also, *Pfaff v. Wells Elecs. Inc., 5 F.3d 514, 517 (Fed. Cir. 1993)* (finding pre-Markman that a claim construction order is entitled to preclusive effect where the parties settled the first action). In TM Patents, the defendant sought to have the district court adopt the claim construction from a prior case that the same patent-holder [*19] had settled with a different defendant. The court rejected the patent-holder's argument that the claim construction could not have a preclusive effect since the parties settled the first action.

> [A] judgment that is not "final" in the sense of *28 U.S.C. § 1291* can nonetheless be considered "final" in the sense of precluding further litigation of issues that were actually determined in a judgment. Whether a ruling is sufficiently final turns on 'such factors as the nature of the decision (i.e., that it was not avowedly tentative), the adequacy of the hearing, and the opportunity for review.' As Judge Friendly observed, "Finality' in the context here relevant may mean little more than that the litigation of a particular issue has reached such a stage that a court sees no really good reasons for permitting it to be litigated again.'

TM Patents, 72 F. Supp. 2d at 377. After a lengthy and thoughtful discussion, the court concluded that "after Markman, with its requirement that the Court construe the patent for the jury as a matter of law, it is inconceivable that a fully-litigated determination after a first Markman hearing would [*20] not be preclusive in subsequent actions involving disputed claims under the same patent."*Id.*

The TM Patent court is the only post-Markman, case that addresses issue preclusion in the context of settlement. In finding the patent-holder bound by the claim construction, the court noted that "[a] party who cuts off his right to review by settling a disputed matter cannot complain that the question was not reviewed on appeal." *Id. at 378*. The Court agrees that claim construction from

a prior case that settled ought to have a preclusive effect so long as the other requirements for collateral estoppel are met. [8]

> 8 The other cases which have addressed the preclusive effect to be given the claim construction of a prior court involving the same patent-holder but different opposing parties did not involve settlement. In *Graco Children's Product, Inc. v. Regalo Int'l, LLC, 77 F. Supp. 2d 660, 664-65 (E.D. Pa 1999)*, the court found that Markman does not require courts to apply issue preclusion automatically in every case. Since the patent holder in Graco could not have appealed the issues it lost on in claim construction because it ultimately prevailed as to infringement, the Graco could found preclusion would be unfair. In *Abbott Lab v. Dey, 110 F. Supp. 2d 667, 670-671 (N.D. Ill 2000)*, the court gave a prior court's claim construction preclusive effect since the patent-holder could have, and in fact, did appeal the claim construction.

[*21] The fourth and final requirement limits the application of collateral estoppel to a party who had a full and fair opportunity to litigate the issue in the first action. The Court notes that the same law firm represented ISD as represents SST and that SST was aware of the claim construction hearings, however, this does not mean that SST had a "full and fair opportunity" to litigate the issue. Atmel argues that SST could have, but did not, seek to intervene in the Markman hearings. Failure to do so does not waive SST's right to litigate the issue in the present action. Cf. *Allen-Bradley Co., LLC v. Kollmorgen Corp., 199 F.R.D. 316, 317 (E.D. Wisc. 2001)* (finding no right to intervene because of collateral effect of claim construction). Since SST was not a party to the ISD action, collateral estoppel does not bar SST from seeking a new claim construction. [9]

> 9 The Court notes that since Atmel was a party in both the ISD and SST cases, collateral estoppel may bar Atmel from relitigating the claim construction. See, e.g., *TM Patents, 72 F. Supp. 2d at 375-79*.

[*22] This conclusion, however, does not require the Court to ignore the ISD claim construction in the present motion for summary judgment. SST has called the ISD claim construction "well-reasoned" and "correct." It sought, albeit unsuccessfully, to have the claim construction adopted in ITC litigation. Under these circumstances, the Court finds it appropriate to rely on the claim construction.

B. Infringement

The Court now turns to the substantive issue of infringement. As set out supra, this Court has already determined that the cp12 structures are equivalent to five of the elements in the '811 circuit. [10] In light of these orders, the primary issues remaining in dispute are: (1) which lines on the cp12 circuit are "conductive lines having an inherent distributive capacitance" and whether such lines are equivalent to line 8 on the '811 circuit; and (2) whether the cp12 circuit contains devices meeting the "transfer means" limitation and whether such devices are the equivalent to the '811 circuit's transfer means. The Court addresses these two issues first, before examining whether the prior orders on the remaining elements are consistent with the Court's subsequent [*23] claim construction.

> 10 These are the selecting means, the high voltage generating means, the voltage pulse generating means, the means for capacitively coupling, and the selecting means.

1. "Conductive lines having inherent distributed capacitance"

Although this language occurs in the preamble to the claim, construing the meaning of "conductive lines having inherent distributed capacitance" is necessary to give meaning to the claim because claim limitations refer to "said conductive lines." See e.g., *Porter v. Farmers Supply Service, Inc., 790 F.2d 882, 885 (Fed. Cir. 1986)*; *Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 896 (Fed. Cir. 1984)*. The Court construed the phrase "conductive lines having inherent distributed capacitance" as:

> [a] conductive line in a semiconductor circuit that has capacitance distributed along its length that must be accounted for in the operation of the claimed circuit, and includes word lines, y-lines, write lines, [*24] and select lines.

(CC Order at 7.) It is uncontroverted that the *'811* patent discloses line 8 as a conductive line having inherent distributed capacitance. It is also uncontroverted that line s0 is a conductive line with an inherent distributed capacitance.

The parties dispute whether the interconnect N1 in the cp12 circuit qualifies as conductive line with inherent distributed capacitance. Atmel argues N1 is a conductive line with a total capacitance composed of the "intrinsic capacitance of the line itself" and "the capacitance added to the line at . . . the points at which NH9, NH11, NH7, NH5 and NH6 connect to line N1." Atmel Mot. at 9. Atmel contends that the intrinsic capacitance is "distrib-

uted" because the intrinsic capacitance appears continuously along the line and because the five transistors are connected at different locations on the line. Atmel Mot. at 9-10 & n.12.

Atmel's argument is at odds with the claim language and the claim construction as it collapses the phrase "conductive lines having inherent distributed capacitance" into simply "conductive lines." The Court specifically rejected Atmel's argument that "any line in a semiconductor circuit that can conduct [*25] electronic current and store electronic charge is a conductive line having inherent distributed capacitance . . . because almost all conductive lines disposed on a semiconductor substrate would fall within this definition, and the claim already requires that the conductive line be 'disposed in a semiconductor circuit.'" (CC Order at 6-7.) Similarly, finding N1's capacitance to be distributed simply because its transistors are at different locations would apply to nearly all conductive lines and render the adjective "distributed" superfluous. [11] In addition, the specification disclosed that the invention could be used to raise the voltage on a word line, as well as "other lines, such as y-lines, select lines, write lines," as well as "sense lines" that are connected to the memory array. (Patent, 7:26-31; 7:46-8:3.) In construing the claim, the Court conceived of these lines being relatively long lines with sufficient capacitance that the capacitance must be accounted for in the circuit's operation. CC Order at 6-7. For example, a word line on the SST circuit has 1,024 transistors and a total capacitance of 1.6 picofarads. (DeBruine Decl. in Opp. to Motion for Summary Judgment, Exh. [*26] 9 (Expert Witness Statement of William Gosney, dated October 31, 1997). In contrast, N1 is a very short line internal to the charge-pump circuitry with five transistors and a total capacitance of only 0.018 picofarads. Id. Atmel argues that N1's capacitance is "accounted for in the operation of the circuit" because the chip requires the line to have a small, rather than large, capacitance. Atmel Mot. at 9-10. This argument reads out the "accounted for in the operation of the circuit" language since nearly all lines must be so accounted for. Nothing in the claim language or the specification indicates that the circuit could be used to raise the voltage on a short interconnect line with only five transistors whose capacitance was purposely designed to be as small as possible as well as long lines, such as word lines, y-lines, write lines and sense lines. Accordingly, the Court finds that there is no genuine issue of material fact that line N1 is not a conductive line having inherent distributed capacitance as disclosed in the claim.

> 11 In SJ Order # 1, the Court rejected Atmel's argument N1 has distributed capacitance because it has some delay time. The Court stated that a line with "distributed" capacitance is "one for which its frequency response time is less than the frequency of the clock signals used in the circuit." SJ Order # 1, at 17 n.4.

[*27] ***2. Transfer means***

The Court's claim construction of the "transfer means" element states:

> The function of the transfer means is to transfer increments of charge from the high voltage generating means to the inherent distributed capacitance of the selective conductive line or lines. The transfer means reacts to the stimulus provided to it when the associated conductive line is selected by the selecting means. The transfer means also increases the charge on a selected conductive line by transferring, or shifting, amounts of charge from the high voltage source to the selected conductive line until the desired high voltage has been achieved.

(CC Order at 20.) The Court identified device 40 and device 46 as the transfer means disclosed in the *'811* patent. (CC Order at 20.) Atmel contends that NH7/NH8 [12] and NH11 or, alternatively, that NH7/NH8, NH11 and NH9, are transfer means equivalent to devices 40 and 46.

> 12 The Court refers to transistors NH7 and NH8 as NH7/NH8 in order to compare the structures of SST's dual-pump system with the corresponding structures disclosed in the patent's single-pump structure.

[*28] The first step is to determine whether the devices NH7/NH8, NH11, or alternatively, NH7/NH8, NH11 and NH9, have an identical function as devices 40 and 46, i.e., do they transfer increments of charge from the high voltage generating means to line s0? It is clear that the devices operate to transfer charge to line s0. When the voltage on N1 increases, NH11 turns on. The clock goes high, and the voltage is capacitively coupled to nodes 4 and 2. NH7/NH8 then turn on, charging N1, which causes NH11 to turn on again. The Court recognizes that NH11 and NH7/NH8 operate to transfer increments of charge to N1 on the SST circuit in a manner identical to how device 40 and 46 transfer increments of charge to line 8 in the '811 circuit. The difference occurs because the cp12 circuit requires additional steps and structures to transfer the charge on N1 to line s0. When the voltage of N1 increases to 8 volts, NH9 turns on, and charge starts to flows from the hv to line s0. Thus, NH7/NH8, NH11 and NH9's combined operation trans-

fers charge from the high voltage generating means to line s0. (Subhedar Decl. Exh 8 at 26, 33-36 ("Infringement Analysis of the SST CPL2 Circuit" by Marvin White); SST's [*29] Suppl. Response, Exh. B at 2242-49 (Expert Witness Gosney's Testimony Before ITC)).

It is also clear that NH9 is a device necessary to this transfer. Without NH9, devices NH11 and NH7/NH8 transfer charge to N1, rather than the conductive line s0. Since the transfer means must transfer charge "to the inherent distributed capacitance of the selected conductive line," NH9 must be included as part of the transfer means. [13] SST's argument that NH9 can not be part of the transfer means because NH9 is not connected to the voltage node conceives of the transfer means too narrowly. [HN9] A means can include a combination of structures. See *35 U.S.C. § 112* P6. The requirement that the transfer means connect to the voltage node does not mean every structure comprising the transfer means must be connected to the voltage node. Since other devices comprising the transfer means are connected to the voltage node, the fact that NH9 is not directly connected is irrelevant.

13 Atmel's argument that the voltage charge need not pass directly through the transfer means misses the point that NH9 is a necessary device in the transfer of voltage to line s0.

[*30] SST contends that although the devices transfer charge, they do so in a continuous manner and do not function to transfer "increments of charge" to line s0. The SST circuit differs from the circuit disclosed in the '811 patent by including a source follower (NH9) between line N1 and line s0. The gate of a source follower does not open until a threshold voltage (Vtx) is achieved. Once the gate voltage reaches Vtx, current begins to flow through NH9 from hv to line s0 as the voltage at the source of NH9 attempts to match the voltage at its gate. The source voltage follows the rising gate voltage less one threshold voltage until it matches the drain voltage (Vdd), at which point the source follower is fully on. The consequence of using a source follower, such as NH9, is that voltage is transferred in a largely continuous flow, rather than in discrete increments, to line s0. This continuous increase is evident in the simulations of the voltage levels on line s0 conducted by both Atmel's and SST's experts. Figure 3 plots the voltage appearing on N1 and on line s0 in the operation of the cpl2 circuit. (Subhedar Decl. Exh 8 at 36 (Infringement Analysis of the SST CPL2 Circuit, by Marvin [*31] White).

Figure 3.

[SEE FIGURE IN ORIGINAL]

It is clear that voltage on N1 on the cpl2 circuit and line 8 on the '811 circuit appears in an incremental manner, whereas the voltage on line s0 rises in a more continuous gradual slope. Atmel, in its Reply, argues that the transfer is not continuous, but consists of "bursts" of voltage that track the increments of charge appearing on line N1. The only evidence Atmel specifically submitted to support this argument is a single paragraph in a declaration of its expert, Marvin White. [HN10] As the patentee, Atmel has the burden of proving "particularized testimony and linking argument as to the 'insubstantiality of the differences' between the claimed invention and the accused device." *Texas Instruments, Inc. v. Cypress Semiconductor Corp., 90 F.3d 1558, 1567 (Fed. Cir. 1996)*. Since Atmel does not reconcile its burst theory with its own witness' simulation indicating a more continuous increase on line s0 and since the Court must construe the evidence in favor of SST, the Court finds that NH11, NH7/NH8 and NH9 transfer continuous voltage, rather than increments of charge, and therefore, the function of these devices [*32] is not identical to the function of devices 40 and 46 in the '811 circuit. Since literal infringement under *§ 112* P6 requires identical functions, the Court finds that there is no genuine issue of material fact as to whether the cpl2 circuit literally infringes the *'811* patent.

This, however, is not the end of the inquiry, as infringement under the doctrine of equivalents remains a possibility. [HN11] Unlike literal infringement, the doctrine of equivalents requires the functions be equivalent, rather than identical. A function is considered equivalent if it does not make a significant impact on the operation of the device. Neither Atmel nor SST discuss the significance of charging the selected line continuously, rather than incrementally. Since the Court must construe evidence (or the lack thereof) in favor of the nonmoving party, Atmel can not meet the evidentiary burden entitling it to summary judgment.

Next, the Court addresses whether the transfer means on the cpl2 circuit are equivalent structures to the transfer means on the '811 circuit. In the '811 circuit, increments of charge are generated by the high voltage generating means, pass through device 40, combine with the voltage [*33] pulses, and finally pass through device 46 to line 8. In the cpl2 circuit, charge from the high voltage generating means flows through NH9 to line s0, without passing through NH11 or NH7/NH8 and without combining with the voltage pulses. The voltage from the high voltage generating means that does participate in the charge-pump operation activates NH9, but does not get transferred from N1 to line s0. (SST's Supp. Response at 5). In brief, the transfer means on the '811 circuit operate to combine the hv voltage with the pulse voltage and then transfer the combined voltage to the

selected line, whereas the transfer means on the cpl2 circuit does not. Although the claim does not explicitly require the voltage to pass through the transfer means, Atmel indicated in the prosecution history that "the word line itself is tied to the voltage node via a novel switching means in the transfer means, which switching means passes the voltage on the node to the word line when the word line has been selected for programming purposes." (DeBruine Decl., Exh. 14 at 2 (Prosecution History of the *'811* patent) (emphasis added)). The node being referred to is node 42 on the '811 circuit, which corresponds [*34] to nodes 2 and 4 on the cpl2 circuit. The transfer means on the cpl2 circuit do not pass the voltage on nodes 2 and 4 to the word line, but rather transfers voltage from hv to the word line. This method of transfer requires the additional structures of the interconnect line N1 and the transistor NH9, which are not disclosed in the *'811* patent. Thus, the transfer means in the cpl2 circuit transfers charge in a different way with the use of additional structures than the transfer means devices 40 and 46 in the '811 circuit. Whether this difference is substantial is a question of fact that precludes this Court from granting summary judgment in Atmel's favor.

Since the '829 patent contains the same transfer means element, the discussion supra applies with equal force to the *'829* patent. Accordingly, the Court holds that Atmel is not entitled to summary judgment of infringement, either literal or under the doctrine of equivalents, on the '829 patent.

3. Means for selecting one or more of said conductive lines

The Court construed *"means . . . for selecting"* as "selecting means actively driving or increasing the voltage on the targeted conductive line to a specific voltage [*35] high enough so that it activates the devices that constitute the transfer means. Merely identifying a line or floating a line does not select it." (CC Order at 8-9.) On the *'811* patent, NOR pre-decoder 10 and post-decoder 20 are the means for selecting. (CC Order at 9-10.) In the SST circuit, the z-decoder circuit and the x-decoder circuit are the means for selecting the conductive line. The difference between the two means is that the '811 claim discloses a NOR predecoder and the SST employs a NAND predecoder. In a previous summary judgment order, the Court found an absence of evidence by SST that the NOR and NAND predecoders are equivalents. The finding of equivalency is consistent with the claim construction as it is uncontroverted that the NAND predecoder drives the voltage on line s0 to the voltage necessary for opening NH11.

4. High voltage generating means

The Court construed the "function of the high voltage generating means" as the "generation [of a] higher voltage from a lower voltage power supply connected to the semiconductor circuit." (CC Order at 13.) The Court identified the structure disclosed in the *'811* patent as "a multiple-stage multiplier circuit [*36] operated in conjunction with a system clock." In the 1997 Summary Judgment Order, the Court found that "because the SST high voltage generating means uses essentially the same basic technology as that disclosed in the *'811* patent and the one major difference between the two requires only an insubstantial modification, the SST voltage generating device means is equivalent to the means disclosed in the *'811* patent." The Court's finding of equivalency is consistent with the more recent claim construction.

5. Voltage pulse generating means

The Court construed a "voltage pulse" to be "a signal that starts off in one state, changes to a second state after the passage of some period of time, and then changes back to the first state after the passage of another period of time." (CC Order at 15.) The Court found the structure disclosed in the *'811* patent was a ring oscillator whose voltage signal swings between two values. In its 1997 Summary Judgment Order, the Court found that it was undisputed that SST's cplclk circuit (a ring oscillator that generates clock signals "clk" and "clk #") is within the scope of the voltage pulse generating means limitation in the *'811 patent.* (SJ [*37] Order # 1 at 22.) Again, this conclusion is consistent and supported by the Court's subsequent claim construction as the cplclk circuit starts off in a "clk" state, changes to "clk #" after a passage of time, and then changes back to "clk" after the passage of another period of time.

6. Means for capacitively coupling

The Court held that the "means for capacitively coupling" function to "transfer the voltage pulses from the voltage pulse generating means to the voltage node through the use of capacitance, or the storing of charge." (CC Order at 17.) The Court identified device 44, either configured as an enhancement transistor or a native transistor, to be the structure disclosed in the specification as the means for capacitively coupling. (CC Order at 17.) In the 1997 Summary Judgment Order, the Court found it "uncontroverted that each of the two means for capacitatively coupling found in the SST cpl2 circuits, device NH12 and [device] NH13, is the same as the corresponding structure, device 44, . . . disclosed in the patent." (SJ Order # 1 at 23.) This conclusion is consistent with the claim construction since NH12 and NH13 both transfer voltage pulses from the cplclk [*38] circuit to voltage node 2 and node 4, respectively, through the use of capacitance. [14]

14 Since the SST is a dual-pump system, there are two devices corresponding to the device disclosed in the '*811* patent's single-pump system.

*7. **Switching means***

The Court's claim construction order states:

> The function of the switching means is to block substantially all the flow of current and transfer of charge from the high voltage generating means to the unselected conductive lines. The switching means blocks substantially all of the flow of current by eliminating direct conducting paths from the high voltage source to unselected conductive lines. Substantially all refers to all but an insignificant amount, such that any remaining current that is permitted to flow is not an important or significant design consideration.

(CC Order at 22-23.) The Court identified transistor 46 as the switching means when transistor 40 is implemented as a native device. (SJ Order # 1 at 27.) When transistor 40 is [*39] implemented as an enhancement device, transistor 40 is also the switching means. In the 1997 Summary Judgment Order, the Court identified NH11 as the switching means in the SST circuit. (SJ Order # 1 at 27.) The Court also found that NH11 is the equivalent of transistor 40 when transistor 40 is implemented as an enhancement device. (SJ Order # 1 at 27.) The Court notes that neither the Court's 1997 Order nor the parties' papers address whether NH11 is an equivalent to device 46 when transistor 40 is implemented as a native device.

IV. CONCLUSION

For the reasons discussed above, the Court DENIES Atmel's Motion for Summary Judgment of Infringement of the '811 and '829 Patents.

IT IS SO ORDERED.

Dated: June 20, 2001

SAMUEL CONTI

UNITED STATES DISTRICT JUDGE

EXHIBIT D

Slip Copy
Slip Copy, 2007 WL 1577843 (E.D.Mich.)
(Cite as: 2007 WL 1577843 (E.D.Mich.))

Only the Westlaw citation is currently available.

United Stated District Court,
E.D. Michigan,
Southern Division.
EATON CORPORATION, Plaintiff
v.
ZF MERITOR LLC, Arvinmeritor, Inc. and ZF Friedrichshafen AG, Defendants.
No. 03-74844.

Feb. 22, 2007.

Alan C. Harnisch, Strobl and Sharp, Bloomfield Hills, MI, John F. Rabena, William H. Mandir, Sughrue, Mion, Washington, DC, Keith P. Schoeneberger, Michael H. King, Spencer R. Wood, Leboeuf, Lamb, Chicago, IL, Lawrence S. Gadd, Kecskes and Gadd, Plymouth, MI, for Plaintiff.

David D. Murray, Raymond J. Vivacqua, James K. Cleland, Brinks, Hofer, Ann Arbor, MI, Gary M. Ropski, Laura B. Miller, Thomas J. Filarski, Brinks, Hofer, Chicago, IL, for Defendants.

SPECIAL MASTER'S REPORT AND RECOMMENDATIONS ON PLAINTIFF'S AND DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT ON U.S.PATENTS 3,899,279; 5,664,458; & 5,624,350

JAMES F. DAVIS, Special Master.

*1 1. By Order of Reference dated November 16, 2006, the Court referred to the Special Master six motions for summary judgment:

(a) U.S. Patent 3,899,279
Plaintiff's Motion for Summary Judgment of Infringement Defendants' Motion for Summary Judgment of Non-Infringement
(b) U.S. Patent 5,664,458
Plaintiff's Motion for Summary Judgment of Infringement Defendants' Motion for Summary Judgment of Invalidity and Partial Non-Infringement
(c) U.S. Patent 5,624,350
Plaintiff's Motion for Summary Judgment of Infringement Defendants' Motion for Summary Judgment of Invalidity

2. (a) The asserted claims of these patents were construed by the Special Master in Reports and Recommendations dated August 14, 2006 and September 18, 2006 which were adopted by the Court by Orders dated November 14, 2006 and November 16, 2006.

(b) Oral argument was held on January 23, 2007. A transcript is available from counsel or the Special Master. At the parties' request, a first draft of this report was submitted to counsel for review and comments. Rule 53, Advisory Committee Notes, 2003 Amendments, Subdivision (f). The parties commented and replied to each others comments. Thereafter, a second draft was submitted to counsel. This final report takes into consideration all comments made by counsel.

THE LAW

3. Summary judgment is appropriate in a patent case, like any other, when there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law. *Avia Group Int'l, Inv. v. L.A. Gear Calif., Inc.*, 853 F.2d 1557 (Fed.Cir.1988).

Determining patent infringement is a two-step process. First, the patent claim must be properly construed to determine its scope and meaning. Second, the claim as construed must be compared to the accused device or process. Patent infringement, literal or by equivalence, is a question of fact and must be proved by a preponderance of the evidence. *Markman v. Westview Instruments, Inc.* 52 F.3d 967 (Fed.Cir.1995), *aff'd* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). To prove literal infringement, the patentee must show that the accused device contains every limitation in the asserted claim. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339 (Fed.Cir.1999). A device that contains an infringing mode of operation infringes even it that device also contains modes of operation that do not infringe. *Hilgraeve Corp. v. Symantec Corp.* 265 F.3d 1336 (Fed.Cir.2001).

Patents are presumed valid. 35 U.S.C. § 282. Invalidity for anticipation or obviousness must be established by clear and convincing evidence. *Intellectual Prop. Dev. Inc. v. UA-Columbia Cablevision of Westchester Inc.* 336 F.3d 1308 (Fed.Cir.2003). Invalidity for anticipation requires

that each and every limitation of a claim, expressly or inherently, be found in a single prior art reference. *Schering Corp. v. Geneva Pharm.*, 339 F.3d 1373 (Fed.Cir.2003). Summary judgment of patent invalidity is not appropriate when there are disputed material facts and when there is conflicting expert evidence requiring credibility determinations. *Teleflex, Incorporated and Technology Holding Company v. KSR International Co* (Fed.Cir. No. 04-1152 decided January 6, 2005) citing *Jones v. Hardy*, 727 F.2d 1524 (Fed.Cir.1984).

PATENTS IN SUIT

The '279 patent

***2** 4. The '279 patent was the subject of an International Trade Commission (ITC) investigation No. 337-TA-503 (ITC 2004) in which the ITC construed claim 15. The ITC's claim construction set out at ¶ ¶ 12 and 13 of the Special Master Report dated 8/14/06 has been adopted by the Court. Based on that claim construction, the ITC held that defendants' accused product called "FreedomLine Transmission System" (also called Pak 5 version) literally infringes claim 15.

That holding followed a two-week trial before an Administrative Law Judge (ALJ) in which all parties here appeared and were represented by the same counsel as here. Furthermore, many if not all of the witnesses involved in the ITC case are involved here, by declaration, deposition or live testimony during the claim construction proceedings. The full ITC decided not to review the ALJ's 225-page Recommended Determination, thus adopting it. Neither party appealed the ITC decision.

5. Based on the ITC ruling, plaintiff Eaton seeks summary judgment of literal infringement of claim 15 for defendants' importation and sale in the United States of defendants' "FreedomLine Transmission System". Though recognizing that the ITC determination is not binding on this Court, plaintiff contends that determination is entitled to "considerable weight" because (a) this Court has adopted the ITC's claim construction and (b) the ITC infringement determination is "premised on defendants' own testimony concerning the operation and structure of the FreedomLine system." Thus plaintiff contends summary judgment is appropriate because there are no "genuine issues of material fact" and the ITC properly applied the correct claim construction to establish literal infringement.

6. Defendants oppose summary judgment contending there are "genuine issues of material fact" and that plaintiff "has not proven and cannot prove infringement" on the ITC record. Defendants submit two declarations, along with excerpts from the ITC record to support their contentions that there are issues here "not litigated in the ITC" which "must be litigated" here. In essence, defendants contend that plaintiff has failed to establish through the ITC record that "each and every limitation of claim 15 is literally present in the ... FreedomLine system."

7. The issues focus on the final paragraph of claim 15. Claim 15 and its construction are set out below with the last paragraph underlined for emphasis:

> A control system for controlling a vehicular automatic mechanical transmission system utilized in connection with a vehicle equipped with vehicle wheel brakes for retarding the rotation of at least one of the vehicle drive wheels, said automatic mechanical transmission system comprising a throttle controlled engine, a change gear transmission having a plurality of gear ratio combinations selectably engageable between a transmission input shaft and the transmission output shaft, said transmission output shaft drivingly coupled to said vehicle drive wheels, and a disengageable coupling drivingly interposed said engine and said transmission input shaft, said automatic mechanical transmission system additionally comprising an information processing unit having [a] *means for receiving a plurality of input signals including (1) an input signal indicative of the rotational speed of said transmission output shaft,* said processing unit including [b] *means for processing said input signals in accordance with a program to provide a predetermined* [c] *gear ratio for a given combination of input signals and for generating command output signals whereby said transmission is operated in accordance with said program,* and [d] *means associated with said transmission system effective to actuate said transmission system to effect engagement of one of said gear ratios combinations in response to said output signals from said processing unit,* the system characterized by:
>
> ***3** *[e] means for sensing the presence of [f] wheel lock-up condition, and, if and as long as the presence of a wheel lock-up is sensed, [g] prohibiting said processing unit from generating all transmission [h] gear change command output signals.*

8. The construction of phrases [e] through [h] above

is set out below:

[e] Construed function: "sensing the presence of a wheel lock-up condition"
Corresponding structure: "the central processing unit 56 and either (1) an AB S system or (2) an algorithm dependent on the speed of the transmission output shaft"
[f] "A wheel lock-up condition is also known as a skid and refers to the condition in which the vehicle is moving, but the wheels are not rotating at a speed representative of the vehicle speed"
[g] Construed function: "preventing all signals from being produced by the processing unit that direct the trans-mission operators to cause a change in the gear ratio of the transmission"
Corresponding structure: "the logic of the central processing unit"
[h] "a signal from the processing unit that directs the transmission operators to cause a change in the gear ratio of the transmission"
(Special Master Rept. 8/14/06 at ¶ ¶ 12-13)

9. To understand the issues, it is desirable to review briefly the patented system as defined by claim 15. Ordinarily in a truck automatic transmission system, the rotational speed of the transmission output shaft indicates and is directly related to the truck's ground speed. The processor in the truck's transmission computer system thus makes gear shift decisions based on transmission output shaft rotational speed. ('279 patent, Col. 1, ll. 27- 42).

A so-called "wheel lock-up condition" can occur when a truck's brakes are applied and one or more wheels lose their grip on the road surface and stop rotating while the truck continues to move (or skid) down the road, sometimes at significant speeds. This condition can cause the truck's transmission control system to believe that the truck has purposely slowed down and thus cause the system to downshift to a gear which in fact is inappropriate to how fast the truck is actually moving. This could cause the driver to lose control of the truck. (Special Master Rept. 8/14/06 at ¶ 8)

The solution to this problem is the subject of the '279 patent, viz. to prohibit the transmission from downshifting during wheel lock-up (and skidding). Claim 15 defines a system by which the clutch is "disengaged" and all "gear change operations" cease if a "wheel lock-up" condition is "sensed" until such time that the wheel lock-up is terminated. (Special Master Rept. 8/14/06 at ¶ 9). Specifically, as set out in the last paragraph of claim 15, if a wheel lock-up is "sensed", the "processing unit" is "prohibited" from generating *all* transmission gear change control output signals.

10. The parties' dispute centers on the meaning of "all".

(i) Defendants contend that in the accused FreedomLine system, not *all* gear change command signals are "prohibited" in the event of a lock-up. In particular, defendants contend that the FreedomLine system permits "starting gear shifts during a wheel lock-up condition." Defendants further contend that the ITC decision on infringement "did not address starting gear shifts" during a "lock-up condition"; that this issue was not litigated in the ITC; and such issue raises a "disputed issue of fact"

***4** (ii) Plaintiff disagrees on two grounds. First, plaintiff contends that "starting gear shifts" do not occur during "lock-up conditions", noting that lock-ups or skids only occur when the truck "wheels are not rotating at a speed representative of vehicle speed" ([f] in claim 15, ¶ 8 above). "Starting gear shifts" on the other hand occur when the vehicle is stopped or at reduced slow speeds when the output shaft rotational speed represents the truck speed, i.e. not a lock-up situation. ('279 patent, col. 6, ll. 9-15). Thus plaintiff contends that the ITC record supports the finding that all gear shift commands *during lock-up situations* are "prohibited" by claim 15 and that there is no genuine issue of material fact that FreedomLine transmissions, in permitting "starting gear shifts," are not permitting shifts during a "lock-up condition". In short, plaintiff contends that it is "irrelevant" that FreedomLine permits "starting gear shifts" because such shifts are not included in the prohibited "all" "commands" within the meaning of claim 15, sub clause [g].

Second, plaintiff contends that in any event, defendants made the "same argument" in the ITC regarding "starting gear shifts" and was held to infringe despite FreedomLine's ability to make "standstill [starting gear] shifts". Thus, argues plaintiff, the issue is not new and was resolved against defendants in the ITC.

11. Based on review of the ITC record and the parties' submissions herein, the Special Master finds as follows in ¶ ¶ 12-16.

12. Regarding infringement of claim 15 by FreedomLine transmissions, the ITC held that if the Freedomline system is operating in the fully automatic mode and the ABS [anti-lock braking

system] is active, the automatic drive program of FreedomLine will not request any shifts. In normal operations, vehicles with FreedomLine transmissions operate in the fully automatic mode about 90% of the time.

Further, the ITC held that claim 15 is practiced when an automated transmission control system senses an active signal from an anti-lock brake system and thereafter prohibits the transmission's processor from generating any gear change command signals. It was undisputed in the ITC that 90% of the time FreedomLine transmissions operate in fully automatic mode, where gear change command signals are blocked when the anti-lock system is active. Hence the ALJ held that Eaton had established, by a preponderance of the evidence, that defendants' FreedomLine transmissions practice the system of claim 15. (ITC Final and Recommended Determinations, Jan. 7, 2005 at 152). Exhibit 8, pp. 10-11; Exhibit 7 ¶ ¶ 7-8 and 11 to Plaintiff's Brief, support the ITC's holding (testimony of Mr. Sayman, defendants' Senior Product Engineer, and Dr. Caulfield, plaintiff's expert).

13. "Starting gear shifts" are shifts to a "launch gear" when the transmission output shaft (or vehicle) is stopped or moving at a slow reduced speed. Defs. Exhibit A at ¶ 13; Exhibit B at ¶ 23; Exhibit C at p. 3733, lines 6-23. At such time, output shaft rotational speed indicates and represents a vehicle's ground speed and there is no "lock-up condition" within the meaning of claim 15. Thus, "starting gear shifts" are not shifts which are "prohibited" within the meaning of claim 15. (Plaintiff's Reply Brief, Ex. 9, p. 3977-8).

***5** 14. During an ITC hearing on Oct. 6, 2005, defendants through their Mr. Sayman represented that FreedomLine transmissions held by the ITC to be infringements of claim 15 were capable of making "standstill [starting gear] shifts" and that the "same argument" regarding "standstill shifts" was made earlier in the ITC. The inference plaintiff seeks to have drawn is that the ITC held infringement despite being aware of such capability. (Plaintiff's Reply Brief, Ex. 10 p. 3543, lines 15-25) Such inference is reasonable.

15. Shortly after the ITC held infringement of claim 15 by the FreedomLine transmission, defendants redesigned the transmission in an effort to avoid further infringement. The redesign called Pak 6 version was thereafter litigated in the ITC which held no infringement. Senior representatives of defendants stated publicly at the time that the redesign was done to avoid infringement of a single claim (claim 15) of an Eaton patent. (Plaintiff's Brief, Ex. 1)

16. Other than "starting gear shifts" considerations addressed above in ¶ 13 which the Special Master has rejected, defendants raise no other substantial or material challenges to the ITC holding of infringement of claim 15. Accordingly, the ITC holding of literal infringement of claim 15 stands materially unchallenged; there are no genuine issues of material fact in dispute; and summary judgment of literal infringement of claim 15 here is justified.

17. After the ITC held that defendants' original FreedomLine transmission (Pac 5 version) infringed claim 15 of the '279 patent and entered an exclusion order, defendants redesigned the transmission in an effort to avoid infringement. The redesigned transmission, called Pac 6 version, became the subject of further ITC proceedings resulting in a holding of non-infringement. (ALJ Enforcement Initial Determination and Initial Advisory Opinion, Jan. 10, 2006). Such Determination ultimately became final and was not appealed.

18. In the further proceedings in the ITC on the redesigned product, defendants admitted that such product met all the limitations of claim 15 except for the "all" limitation in the final clause, as discussed above in ¶ ¶ 7-13. After considering new evidence on the redesign, the ALJ concluded that the "redesigned product does not literally infringe claim 15 of the '279 patent in issue since the product does not prohibit the 'processing unit from generating *all* transmission gear change command output signal' ". (ALJ Determination at 23). The ALJ found that "witnesses for [plaintiff Eaton] have admitted that downshifts can occur during an ABS event, and that downshift occurs during a wheel lock-up event." Further, the ALJ found that there was "evidence that upshifts were permitted during a wheel lock-up condition." Noting that "a product needs to prevent all gear shift changes in response to sensing a wheel lock-up situation to infringe claim 15 of the '279 patent" the ALJ concluded no literal infringement. (ALJ Determination at 20-23)

***6** 19. Furthermore with regard to the redesigned product, plaintiff Eaton argued before the ITC that there was infringement of claim 15 under the "doctrine of equivalents" because the redesigned product performed "substantially the same function, way and result as claim 15". Defendants responded that to find "equivalence" here would in effect "read

the word 'all' out of claim 15", contrary to established Supreme Court and Federal Circuit law regarding the "all elements" rule. The ALJ agreed holding that "the 'all elements' rule provides that the doctrine of equivalents does not apply if applying the doctrine would vitiate an existing claim element" citing *Warner Jenkinson Co. v. Hilton Davis Co.*, 520 U.S. 17, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997) and *Freedman Seating Co. v. American Seating Co.* 420 F.3d 1350 (Fed.Cir.2005) (ALJ Determination at 25). *I .e.* reading "all" out of the claims, as sought by plaintiff, would violate the "all elements" rule by vitiating an entire claim element.

In addition, the ALJ held that the redesigned product did not meet the traditional test of equivalence, viz. substantial similarity of function, way and result. The ALJ held there were "substantial differences" in function, way and result, thus avoiding infringement. In sum, the ALJ concluded that the "redesigned product does not infringe claim 15 of the '279 patent in issue under the doctrine of equivalents because there are more than insubstantial differences and the 'all elements' rule has not been satisfied." (ALJ Determination at 24-25)

20. In this Court, defendants move for summary judgment of non-infringement of claim 15, either literally or by equivalence, by the redesigned product. Based on the ITC record, defendants contend that the same claim construction is applied here as in the ITC; that the ITC holding was not appealed; and that the facts established in the ITC support the "correctness of the ruling". Defendants make the same non-infringement arguments with respect to claims 7 and 8 which, though not considered by the ITC, contain the same "all" limitation as claim 15 and thus should follow claim 15.

Plaintiff opposes summary judgment and argues (1) that defendants "ignore" the Special Master's claim construction of "wheel lock-up condition" which renders defendants' "non-infringement arguments moot" and (2) that defendants' motion "fails to address several material facts concerning the operation of FreedomLine in various modes" which "material facts" preclude summary judgment.

21. The Special Master rejects plaintiff's arguments and finds that summary judgment of non-infringement of claim 15 by defendants' redesigned product is justified. As for plaintiff's point (1), the ITC and Special Master apply the same claim construction. Thus, defendants' non-infringement arguments based on claim construction are not "moot". As for plaintiff's point (2), plaintiff relies only on evidence which was before the ITC and considered by that body in its extensive trials of both the original and redesigned FreedomLine products. Plaintiff in essence seeks a retrial on the ITC record which the Special Master rejects.

*7 22. Claims 1 and 3 of the '279 patent asserted by plaintiff were not before the ITC. Defendants seek summary judgment of non-infringement of those claims contending that two limitations thereof, viz. the "immediately disengaged" limitation and the "skid [or lock-up] termination" limitation are "not present in the redesigned FreedomLine system". Defendants rely on declarations of expert and fact witnesses to support their non-infringement arguments as well as certain prior art and prosecution history considerations. Defendants also rely on a document from plaintiff's files which purports to show that plaintiff's in-house counsel conducted an investigation prior to filing litigation against defendants which concluded that "claim 1 is not infringed".

For its part, plaintiff points to expert and fact evidence which it contends shows that "immediately disengaged" and "skid termination" limitations are present in the redesigned product.

23. The Special Master finds that summary judgment of non-infringement of claims 1 and 3 of the '279 patent is not appropriate. There is genuine dispute between the parties' fact and expert witnesses whether the redesigned product has structure which meets the "immediately disengaged" and "skid [or lock-up] termination" limitations of claim 1.

Further, plaintiff's counsel's pre-litigation conclusion of non-infringement, while entitled to consideration, is not determinative and must be considered in the context of other evidence.

The '458 patent

24. Plaintiff moves for summary judgment of literal infringement of all asserted claims, viz. claims 1 and 12 (independent claims) and claims 3-6 and 14-17 (respectively, dependent on claims 1 and 12) by defendants' ZF SureShift lever embodiment of its FreedomLine transmission. Plaintiff contends that based on the Court's claim construction and evidence of defendants' experts (Dr. Gregory V. Davis and Dr. Douglass Locke), defendants' fact witness (Robert Sayman) and plaintiff's expert (Dr. Edward M. Caulfield), there are no disputed fact issues and

infringement is established as a matter of law. Defendants oppose contending there are "disputed issues of material fact" as well as "mischaracterizations" of the accused FreedomLine system.

Furthermore, defendants move (1) for summary judgment of invalidity of the asserted claims under 35 U.S.C. § § 102 and 103 (anticipation and obviousness) and (2) for partial summary judgment of non-infringement of another of defendants' FreedomLine embodiments called SmartShift. Plaintiff opposes both motions on grounds of material fact disputes.

25. Turning first to plaintiff's motion for summary judgment of infringement by SureShift, Dr. Locke and Mr. Sayman, defendants' Senior Product Engineer, both testified by deposition in this case and Dr. Davis submitted an expert declaration incorporating testimony of both Locke and Sayman. Plaintiff contends that Dr. Davis' declaration (taken together with the Locke and Sayman testimony), Dr. Caulfield's declaration and the Court's claim construction leave no material facts in dispute and that summary judgment of infringement "is now appropriate". The Special Master agrees and makes the following findings in ¶ ¶ 26-29 below.

***8** 26. There is no dispute that the accused SureShift product meets all limitations of the preamble of claim 1 which is set out at ¶ 18 of Special Master Report dated 8/14/06.

27. As for the body of claim 1 and its three clauses, viz. "determining currently engaged transmission ratio"; "determining current vehicle speed"; and "if the transmission is in neutral ... determined as a factor of current vehicle speed," the evidence from defendants' own witnesses (cited specifically in plaintiff's brief at pp. 7-11) establishes that the SureShift meets the claim limitations. Therefore, literal infringement of method claim 1 (as well as counterpart apparatus claim 12) is established.

28. Defendants' principal arguments against infringement of claim 1, as understood, raise prior art considerations which are misplaced and rejected.

29. Regarding dependent claims 3-6 and 14-17, as those claims are construed in ¶ 23 in Special Master Report dated 8/14/06, they are infringed based on Dr. Caulfield's declaration at pp. 22-23 (cited specifically in plaintiff's brief at 11-12). Those claims relate to the "approximate rolling start gear ratio selected" for a rolling start situation and setout "specific numerical ratios, i.e. engine speed divided by output shaft speed as set out in each particular claim." Dr. Caulfield's declaration is based on actual test data of the accused system, which data is not challenged by defendants. The data as explained by Dr. Caulfield establishes that the claimed ratios "are met" by such "test data". Defendants provide no contrary data.

Further, defendants specifically challenge claims 5-6 and 16-17 arguing that their claim language "substantially equal to", referring to ratios, is not met by the accused device. (Claims 5 and 6 differ from claims 4 and 3, respectively, in using the phrase *"substantially* equal to" rather then "equal to" in referring to "gear ratio". Claims 16 and 17 bear the same relationship respectively to claims 15 and 14).

Defendants' argument is rejected. The commonly-employed claim phrase "substantially equal to" impacts the breadth of the claim and is used here, plaintiff contends, "for the very purpose of allowing the claims to cover situations that were not exactly equal". While the "substantiality" of differences between a claimed invention and an accused device often raises fact issues of infringement (*e.g.* *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc. et al* 424 F.3d 1293, 1316 (Fed.Cir.2005)) defendants have presented no evidence or persuasive reasons why, in the context of the invention and claims here, the ratio differences are material to deciding infringement. Dr. Davis' "detailed analysis of the test data" upon which defendants rely fails to do so. *E.g.* Dr. Davis' assertion that the "ratio selected by the FreedomLine (2.7:1) differs from the claimed ratios (1.4:1 and 1.1:1)" does not, without more (e.g. prosecution history or prior art considerations), explain why those ratio differences are material to deciding infringement.

***9** 30. Turning next to defendants' motion for summary judgment of invalidity of the asserted claims of '458 under 35 U.S.C. § § 102 and 103 (anticipation and obviousness), defendants assert invalidity "in light of at least three prior art references that were not considered by the United States Patent Office prior to issuance of the '458 patent." In support of the motion, defendants rely on the declaration of Dr. Davis, excerpts from a deposition of Dr. Caulfield and materials from a European patent file history. Dr. Davis' declaration includes an analysis of the '458 patent and the "key prior art references" above noted. Dr. Davis concludes invalidity under 35 U.S.C. § 102 and/or § 103.

Plaintiff opposes and relies on the declaration of Dr. Caulfield, excerpts from Dr. Caulfield's deposition and excerpts from the deposition of Dr. Locke.

It is unnecessary to discuss the submitted evidence in detail. Suffice it to say that Dr. Caulfield disagrees with all of Dr. Davis' conclusions on validity, believing that all the asserted claims of the '458 patent are "valid". The respective declarations and related evidence raise material fact disputes. Summary judgment is not appropriate.

31. Turning last to defendants' motion for partial summary judgment of non-infringement of defendants' FreedomLine embodiment called SmartShift, defendants contend the SmartShift does not infringe because it "does not include Step (3)(a) of independent claim 1 (or the corresponding logic rules of independent claim 12)", hence no literal infringement or infringement by equivalence. Defendants rely on Dr. Davis' report noted above as well as excerpts from the deposition of Klaus Wohr, a Rule 30(b)(6) witness for defendants and excerpts from the deposition of Keith Wright, an engineer with plaintiff Eaton.

Plaintiff does not deny that there is no literal infringement. Therefore summary judgment of no literal infringement is appropriate. However, plaintiff opposes summary judgment of no infringement by equivalence, based on deposition testimony and a declaration of its expert Dr. Caulfield. Such evidence, though sparse and arguably conclusory (*Texas Instruments Incorporated v. Cypress Semiconductor Corporation et al* 90 F.3d 1558, 1555-1569 (Fed.Cir.1996)) nevertheless raises disputed material fact issues with Dr. Davis' declaration on the same subject about the "substantiality" of the differences between the claimed structure and the accused structure. Accordingly, defendants' motion for summary judgment of no infringement by equivalents is not appropriate.

The '350 patent

32. Plaintiff moves for summary judgment of literal infringement of claims 1, 2, 8 and 9 of the '350 patent. Plaintiff contends that earlier resolution of claim construction issues coupled with "no material fact disputes as to the operation of the accused products" makes summary judgment appropriate. Defendants disagree based on asserted "disputed facts, omissions of other material facts and mischaracterizations of the operation of the FreedomLine transmissions systems".

***10** In particular, defendants contend that plaintiff cannot prove

(1) that the FreedomLine system "operates to determine both touch point and approach point" within the meaning of the claims, and

(2) that the FreedomLine system operates to cause "the clutch to assume and remain at an approach point while awaiting a clutch engagement command" within the meaning of the claims.

33. Claims 1 and 8, the independent claims, are set out below:

Claim 1. A method for controlling an automated vehicular master-friction clutch (16) drivingly interposed between an engine (14) and an input shaft (52) of a multiple-speed transmission (12), said clutch having an *approach point condition,* said method characterized by:

determining a value (AP) of a clutch control parameter indicative of said clutch being at the *approach point condition;* and

(b) *after disengaging said clutch and while awaiting a clutch engagement command, causing said clutch to assume and remain in the approach point condition thereof.*

Claim 8. A method for controlling an automated vehicular master friction clutch (16) drivingly interposed between an engine (14) and an input shaft (52) of a multiple-speed transmission (12), said clutch having a *touch point condition* and an *approach point condition,* said method characterized by:

(a) *determining a first value (TP) of a clutch control parameter indicative of said clutch being at the touch point condition thereof;*

(b) *determining a second value (AP) of said clutch control parameter indicative of said clutch being at the approach point condition thereof;* and

(c) *after disengaging said clutch and while awaiting a clutch engagement command, causing said clutch to assume and remain in the approach point condition thereof.*

(Special Master Rept. 9/18/06 at ¶ 10)

The claim construction issues centered on the meaning of "touch point" "touch point condition", "approach point" and "approach point condition". "Touch point" was construed to mean "a point of incipient engagement of the clutch and requires some minimum amount of torque transfer across the clutch." "Approach point" means "a point intermediate full disengagement and the touch point, preferably about to the touch point". (Special Master Rept. 9/18/06 at ¶ 12)

34. With respect to issue (1) in ¶ 32 above, defendants contend that the FreedomLine system does not "determine touch points and approach points" as described and claimed in the '350 patent. In particular, "touch point" is the "point of incipient engagement of the clutch [with the input transmission shaft] and "requires some minimum amount of torque transfer across the clutch". Defendants contend that at the point of initial engagement between the clutch and input transmission shaft in FreedomLine, called the Mitnahmepunkt or MIT point, a "significant" rather than "minimal" amount of torque is transferred, viz. "enough torque to spin the transmission input shaft up to 400 rpm, which is two thirds of engine idle speed". Defendants argue that such "significant" torque transfer is not "minimal" torque transfer within the meaning of the claim and that the Mitnahmepunkt point therefore is not a "touch point." Plaintiff, on the other hand, contends that MIT is a "touch point" because it is a point of "initial torque transfer" and a point of "minimal amount of torque." Furthermore, plaintiff agrees that "more than a minimal [amount of torque transfer]" is outside the scope of the claims. (Hearing Tr. 145)

***11** The evidence shows that the MIT point is a point of "initial torque transfer ... *as a result of which the transmission input shaft is accelerated.*" (emphasis supplied) (Ex. 3 at ZFM 086502) Plaintiff does not dispute this evidence. Defendants thus contend that such "acceleration", up to 400 rpm, is the result of "significant", not "minimal", torque transfer and therefore MIT is not a "touch point." Plaintiff agrees that "the claimed 'touch point' must be a point of 'incipient engagement' and therefore cannot be a point that transfers large amounts of torque". (Pl. Comments to Sp. Master Draft Report 2/9/07 at 5) Furthermore plaintiff does not dispute defendants' contention that shaft acceleration occurs up to 400 rpm but offers no explanation how such can occur with minimal, rather than significant or substantial torque. (Hearing Tr. 134) Plaintiff also contends that tests it conducted (not in this record) show that the MIT point has "10 pounds of torque" which is "a minimal amount, exactly as in the ['350] patent." (Hearing Tr. 146) Defendants dispute those tests, both the way conducted and the results. (Hearing Tr. 150-1)

The short of it is that there are material fact disputes whether MIT is a "touch point" within the meaning of the claims. Accordingly on this record plaintiff has failed to establish that MIT is a "touch point".

Defendants further contend that without a "touch point", FreedomLine cannot have an "approach point" because "approach point" is defined with reference to "touch point" i.e. a "point intermediate full disengagement and touch point". Defendants do not dispute that another point in the FreedomLine system, the Anlegepunkt point, is located "at a 7 mm offset from Mitnahmepunkt toward clutch disengagement" (Dr. Davis declar. 11/5/06 at ¶ 15). It is thus a "point intermediate full disengagement and the touch point, preferably about to touch point." However defendants correctly argue that it cannot be an "approach point" within the meaning of the claims because there is no established "touch point". Plaintiff's expert Dr. Caulfield made clear in his declarations and testimony on claim construction that, within the meaning of the claims, there is no "approach point" without a "touch point". (Defendants' Opposition Brief at 10-11). Dr. Caulfield stated "if a touch point is not determined, the approach point necessarily cannot be determined" (Caulfield Rebuttal rept. at p. 5)

35. With respect to issue (2) in ¶ 32 above, defendants deny (as noted above in ¶ 34) that the FreedomLine system has an "approach point." However even assuming (as defendants do for argument purposes) that FreedomLine has an "approach point," (the Anlegepunkt point), defendants contend that the claims are not met because during gear changing in FreedomLine, the clutch is not programmed to "assume and reside at an approach point while awaiting a clutch engagement command" within the meaning of the claims.

***12** To explain, in the '350 system, when the clutch is disengaged with the expectation of a new gear engagement, the clutch moves to and dwells at the approach point (between fully disengaged and touch point) while it awaits a command to start a new clutch engagement. Thereafter upon a command to engage the clutch, the clutch moves quickly from the approach point where it has been residing to the touch point and thereafter, in modulated movement, to full engagement with the input shaft. ('350 patent, col. 1, ll. 48-54; col.4, ll.39-58; col. 5, ll. 14-26 and 50-60). Hence the claim language at claim 1(b) and claim 8(c).

The FreedomLine system operates differently, according to defendants, with respect to clutch position and movement, and engagement command sequence. When the clutch disengages in preparation for a gear change, the clutch moves to fully disengaged position (Ruhepunkt) where it stays until

a new clutch engagement command is received. It does not move to and reside at another point (such as an approach point) prior to a new engagement command. After the new engagement command, the clutch moves uninterrupted toward engagement with the input shaft, unless lack of synchronization between the engine and input shaft speeds is detected in which event the clutch holds at the Angelepunkt point (approach point) until synchronization is achieved. Thereafter, the clutch continues to move on toward the touch point and finally to modulated closure with the input shaft. (Davis declar. 11/5/02 at ¶ 16).

36. Thus defendants contend that the above-noted operation of FreedomLine does not respond to the claims' requirement that the clutch "assumes and remains" in "approach point condition" "while awaiting a "clutch engagement command". Rather the clutch "awaits" an "engagement command" while it "remains" fully disengaged at Ruhepunkt and then moves, never having "assumed" and "remained" at Angelepunkt, the approach point, awaiting an engagement command. (Davis declar. at ¶ ¶ 16 and 27).

37. Plaintiff disagrees with defendants regarding operation of Freedomline. Plaintiff's expert, Dr. Caulfield, explains that when the clutch disengages in anticipation and preparation for a gear change, the clutch moves first to the fully disengaged position Ruhepunkt. Thereafter, "depending on the mode of operation", the "algorithm will *either* cause the clutch to dwell at the ... [fully disengaged Ruhepunkt] position, *or* at the ... [Angelepunkt] position that is closer to the ... [Mitnahmepunkt position, touch point]" (Emphasis supplied). Then as the clutch is engaged (upon engagement command), it moves from *either* the Ruhepunkt position *or* the Angelepunkt position, whereat it was dwelling, toward engagement with Mitnahmepunkt, the touch point. (Caulfield rept. 3/3/06 at 18)

38. Thus the parties disagree about the operation of FreedomLine in ways material to deciding infringement, viz. whether the clutch "assumes and remains in an approach point condition" "while awaiting a clutch engagement command" which is one mode of operation according to plaintiff (Caulfield rept. 3/3/06 at 18) but not defendants (Davis declar. 11/5/02 at ¶ 27)

***13** In sum, summary judgment of literal infringement of claims 1, 2, 8 and 9 is not appropriate for reasons set out in ¶ ¶ 32-37.

39. Defendants move for summary judgment of invalidity of claims 1-3, 5-6, and 8-9 of the '350 patent under 35 U.S.C. § § 102 (anticipation) and 103 (obviousness). Defendants rely of four prior art references, a declaration of Dr. Davis dated November 9, 2006 and claim charts comparing the elements of the claims to each of the references which charts purport to show that each element is taught in each reference, literally or inherently, as required to prove anticipation. *Schering, supra.* Defendants contend that the "broad claim construction sought by plaintiffs" and adopted by the Court subjects the claims to "further validity scrutiny under ... 35 U.S C. § § 102 and 103" and that such scrutiny results in invalidity. (Special Master Rept. 9/18/06 at ¶ 13)

Plaintiff opposes summary judgment, relying on the reports of Dr. Caulfield dated March 3 and 31, 2006, prior to the claim construction.

40. (a) The prior art references relied on by defendants are

U.S. Patent 4,899,858 ("Cote")
U.S. Patent 4,899,857 ("Tateno")
Published Japanese Patent Application 1-233127 ("Nakadani")
SAE Technical Paper No. 84005 ("Watanabe")

There is no dispute that each reference is statutory prior art under 35 U.S.C § 102(b).

(b) Before considering each of the references separately, it is helpful to describe them in general.

The references all teach methods for controlling an automated vehicle clutch. The clutch is positioned (conventionally) between the engine and the input shaft of a transmission. The references all have in common (with the '350 patent and among themselves) the goal of shortening the time it takes to move the clutch from a position where the clutch is fully disengaged from the shaft to the position where the clutch is fully engaged with the shaft. The references all teach doing so essentially in two steps. The first step is to move the clutch to a position short of, but very near, contact with the shaft. The second step is to move the clutch, upon command, into contact with the shaft whereby torque begins to be transferred. Thereafter, the clutch continues to move into further contact with the shaft, the movement being modulated, i.e. controlled, to bring about further engagement with the shaft up to full engagement and thus full torque transfer.

Defendants contend that the two-step sequence above described is exactly what is done in the '350 patent method wherein the clutch first moves to an "approach point condition" followed by movement, on command, to a "touch point condition." Defendants recognize that the prior art references do not describe their methods and sequences in literal terms of "approach point" and "touch point" but contend that in substance the reference teachings meet the '350 claims, as those claims are construed by the Court, thus rendering the claims invalid as anticipated. Each reference will now be considered in turn.

***14** 41. *'858 ("Cote")* Cote is an Eaton patent and is cited as a prior art reference in the '350 patent. ('350 patent, front page, listed under "References Cited"). Defendants, recognizing that the USPTO cited Cote in the prosecution of '350, nevertheless notes correctly that "a patent may be found to be anticipated on the basis of a reference ... [cited by the USPTO] at the time of issuance," citing *IPXL Holdings, L.L.C. v. Amazon.com, Inc.* 430 F.3d 1377 (Fed.Cir.2005). Defendants assert invalidity of claims 1, 5 and 8 as anticipated by Cote.

42. Dr. Davis' declaration and the claim charts, along with a color-annotated figure in defendants' brief at p. 7, identify in Cote teachings which they contend to be a "touch point" and an "approach point" and how they are determined, within the meaning of the claims. Defendants also identify in Cote a teaching of the operation of the clutch which they contend responds to the claims' requirement for "disengaging" the clutch, followed by the clutch assuming and remaining "in the approach point condition" while "awaiting a clutch engagement command".

Plaintiff's response, based on Dr. Caulfield's 3/31/06 report, is that Cote teaches nothing "more relevant" than the prior art considered by the patent examiner and that Cote does not "teach or suggest anything regarding an approach point or dwelling at an approach point." Plaintiff contends that defendants in the claim charts confuse "the teachings of touch point with approach point" and that Cote "only teaches determining a touch point, not an approach point." Plaintiff also points out that Cote was "incorporated by reference" in the '350 patent specification, noting the presumption of validity of patents under 35 U.S.C. § 282.

Summary judgment of invalidity is not appropriate. There are material fact disputes about whether the "points" in Cote alleged by defendants to be "touch" and "approach" points are such points within the meaning of the claims. *I.e.* whether the point in Cote alleged to be a "touch" point is a point of "incipient engagement" and "minimal" torque transfer; and whether the point in Cote alleged to be an "approach" point is "intermediate" a properly-found "touch point" and full clutch disengagement. Thus invalidity is not established on this record by clear and convincing evidence.

43. *'857 patent ("Tateno")* Tateno was not cited by the USPTO during prosecution of the '350 patent. Defendants assert invalidity of claims 1, 5 and 8 as anticipated by Tateno.

Dr. Davis' declaration and the claim charts, along with a color-annotated figure in defendants' brief at p. 8 illustrating the Tateno method, identify in Tateno what they contend to be a "touch point" and an "approach point" and how they are determined, within the meaning of the claims. Defendants also identify in Tateno the operation of the clutch which responds to the claims' requirement of "disengaging" the clutch, followed by assuming and remaining in the "approach point condition" while "awaiting a clutch engagement command."

***15** Plaintiff's response, based on Dr. Caulfield's 3/31/06 report, is that Tateno does not disclose "determining" or "dwelling at" an approach point "as defined" in the '350 patent; Tateno does not teach a "touch point condition" like '350 because the asserted "touch point" in Tateno is "a point at which "significant driving torque is transmitted" (rather than "minimal" torque); and that other prior art cited by the examiner is more "pertinent" than Tateno.

Summary judgment is not appropriate. There are material fact disputes about whether the "points" in Tateno alleged by defendants to be "touch" and "approach" points are such points within the meaning of the claims. *I.e.* whether the point in Tateno alleged to be a "touch" point is a point of "incipient engagement" and "minimal" torque transfer; and whether the point in Tateno alleged to be an "approach" point is "intermediate" a properly-found "touch point" and full clutch disengagement. Furthermore there is dispute whether in Tateno there is "determining" or "dwelling at" the "approach point", within the meaning of the claims. Thus invalidity is not established on this record by clear and convincing evidence.

44. *Published Japanese Patent Application 1-233127*

("Nakadani")

Nakadani was not cited by the USPTO during prosecution of the '350 patent. Defendants assert invalidity of claims 1, 5 and 8 as anticipated by Nakadani.

Dr. Davis' declaration and claim charts, along with a color-coded figure in defendants' brief at p. 10 illustrating the Nakadani method, identify in Nakadani what they contend to be a "touch point" and an "approach point" and how they are determined, within the meaning of the claims. Defendants also identify in Nakadani the operation of the clutch which responds to the claims' requirement of "disengaging" the clutch, followed by assuming and remaining in the "approach point condition" while "awaiting a clutch engagement command."

Plaintiff's response, based on Dr. Caulfield's 3/31/06 report, is that Nakadani does not disclose a "touch point condition or how a touch point condition would be calibrated"; that there is no disclosure of an "approach point condition between a touch point condition and a fully disengaged point"; and that Nakadani is "less relevant" than "prior art cited by the applicant" of the '350 patent and "considered by the Examiner".

Summary judgment is not appropriate. There are material fact disputes about whether the "points" in Nakadani alleged by defendants to be "touch" and "approach" points are such points within the meaning of the claims *I.e.* whether the point in Nakadani alleged to be a "touch" point is a point of "incipient engagement" and "minimal" torque transfer; and whether the point in Nakadani alleged to be an "approach" point is "intermediate" a properly-found "touch point" and full clutch disengagement. Thus invalidity is not established on this record by clear and convincing evidence.

***16** 45. *SAE Technical Paper No. 84005 ("Watanabe")* Watanabe was not cited by the USPTO during prosecution of the '350 patent. Defendants assert invalidity of claims 1, 5 and 8 as anticipated by Watanabe.

Dr. Davis' declaration and the claim charts, along with color-annotated figures in defendants' brief at pp. 12-13 illustrating the Watanabe method, identify in Watanabe what they contend to be a "touch point" and an "approach point" and how they are determined within the meaning of the claims. Defendants also identify in Watanabe the operation of the clutch which responds to the claims' requirement of "disengaging" the clutch, followed by assuming and remaining in the "approach point condition" while "awaiting a clutch engagement command."

Plaintiff's response, based on Dr. Caulfield's 3/31/06 report, is that Watanabe is "similar to" prior art acknowledged in the '350 patent; that Watanabe does not teach "determining" an approach point that "is a separate and distinct point or condition from the touch point"; that Watanabe does not "store in memory or make any affirmative 'determination' of a second point"; and that Watanabe is "just like" prior art, a '981 patent to Braun, over which '350 was granted.

Summary judgment is not appropriate. There are material fact disputes about whether the "points" in Watanabe alleged by defendants to be "touch" and "approach" points are such points within the meaning of the claims *I.e.* whether the point in Watanabe alleged to be a "touch" point is a point of "incipient engagement" and "minimal" torque transfer; and whether the point in Watanabe alleged to be an "approach" point is "intermediate" a properly-found "touch point" and full clutch disengagement. Thus invalidity is not established on this record by clear and convincing evidence.

46. Claims 2 and 3 of '350 are dependant from claim 1 (method) and claim 6 is dependant from claim 5 (apparatus). All of claims 2, 3 and 6 recite as a claim element an "input shaft retarding device" i.e. a shaft brake. Claim 2 is representative of this requirement:

> 2. The method of claim 1 wherein said transmission has a controllable *input shaft retarding device* associated therewith, said value determined while said device is inactive. (Emphasis supplied).

Defendants contend that claim 2 is invalid as anticipated by each of Tateno, Nakadani and Watanabe under 35 U.S.C. § 102 and that claims 2, 3 and 6 are all invalid for obviousness under 35 U.S.C. § 103 in view of the combination of Cote with any of Tateno, Nakadani and/or Watanabe. Defendants' contention is rejected.

Dr. Davis' declaration does not assert that any of Tateno, Nakadani or Watanabe teaches a "controllable input shaft retarding device" as required by the claims, but that they teach "determining an approach point ... without activating an input shaft brake". While the result of not "activating an input shaft brake" may be the same as not having such a

brake, the claims expressly recite its presence and the law of anticipation is clear that every claim element must be present in single reference to prove anticipation. Thus claim 2 is not anticipated.

***17** Furthermore, defendants fail to establish invalidity for obviousness of claims 2, 3 and 6. Dr. Caulfield's report raises fact issues regarding the obviousness of the presence, absence and operation of an input shaft retarding device which precludes summary judgment. (Caulfield rept. at pp. 6-7)

Accordingly, defendants have failed to establish invalidity of claims 2, 3 and 6 by summary judgment under either 35 U.S.C. § § 102 or 103.

47. Claim 9 which depends from claim 8 (method) recites as follows:

> 9. The method of claim 8 wherein step (c) further comprises, upon determining that clutch engagement is required, causing said clutch to move rapidly to the touch point condition thereof and then causing further clutch engagement in a controlled and modulated manner.

Defendants contend that claim 9 is invalid as anticipated by Cote or obvious in view of the combination of Cote, Tateno, Nakadani or Watanabe. Plaintiff contends that none of the references, alone or in combination, teach or suggest "going rapidly from the approach point condition to a touch point condition and then modulating" as required by the claim. Furthermore plaintiff contends that material fact issues regarding the validity of claim 8 makes summary judgment of claim 9 (dependant on claim 8) inappropriate.

Summary judgment of invalidity of claim 9 is not appropriate for the reasons contended above by plaintiff.

CONCLUSIONS

The '279 patent

Plaintiff's Motion for Summary Judgment of literal Infringement of claim 15 of the '279 patent by defendants' original FreedomLine transmission is GRANTED. (¶ ¶ 4-16)

Defendants' Motion for Summary Judgment of Non-Infringement of claims 15, 7 and 8 of the '279 patent by defendants' redesigned FreedomLine transmission, literally or by equivalence, is GRANTED. (¶ ¶ 17-21)

Defendants' Motion for Summary Judgment of Non-Infringement of claims 1 and 3 of the '279 patent by defendants' redesigned FreedomLine transmission is DENIED. (¶ ¶ 22-23)

The '458 patent

Plaintiff's Motion for Summary Judgment of literal Infringement of claims 1, 3-6, 12 and 14-17 of the '458 patent by defendants' SureShift product is GRANTED. (¶ ¶ 24-29)

Defendants' Motion for Summary Judgment of Invalidity of all asserted claims of the '458 patent is DENIED. (¶ 30)

Defendants' Motion for Partial Summary Judgment of literal Non-Infringement of the '458 patent by its SmartShift product is GRANTED. (¶ 31)

Defendants' Motion for Partial Summary Judgment of Non-Infringment of the ' 458 patent by equivalence by its SmartShift product is DENIED. (¶ 31)

The '350 patent

Plaintiff's Motion for Summary Judgment of literal Infringement of claims 1, 2, 8 and 9 of the '350 patent by defendant's FreedomLine transmission is DENIED. (¶ ¶ 32-38)

Defendants' Motion for Summary Judgment of Invalidity of claims 1, 5, 8 and 9 of the '350 patent is DENIED. (¶ ¶ 39-45, 47)

***18** Defendants' Motion for Summary Judgment of Invalidity of claims 2, 3 and 6 of the '350 patent is DENIED. (¶ ¶ 46).

Slip Copy, 2007 WL 1577843 (E.D.Mich.)

END OF DOCUMENT

EXHIBIT E

Westlaw.
Not Reported in F.Supp.2d
Not Reported in F.Supp.2d, 2003 WL 21640372 (D.Del.)
(Cite as: 2003 WL 21640372 (D.Del.))

H
Only the Westlaw citation is currently available.

United States District Court,
D. Delaware.
ALLOC, INC., a Delaware corporation, et al.,
Plaintiffs,
v.
UNILIN DECOR N.V., a Belgian company, et al.,
Defendants.
No. Civ.A. 03-253-GMS.

July 11, 2003.

MEMORANDUM AND ORDER

SLEET, J.

I. INTRODUCTION

***1** On March 5, 2003, Alloc, Inc. ("Alloc"), Berry Finance N.V. ("Berry"), and Valinge Aluminum AB, ("Valinge") (collectively "the plaintiffs") filed a complaint against Unilin Decor, N.V. ("Unilin") and Quick-Step Flooring, Inc. ("Quick-Step") (collectively "the defendants") alleging infringement of U.S. Patent No. 6,516,579 ("the '579 patent"). The '579 patent is the latest in a series of continuation patents that include U.S. Patent Nos. 5,706,621 ("the '621 patent"), 5,860,267 ("the '267 patent"), 6,023,907 ("the '907 patent"), and 6,182,410 ("the '410 patent").

The '621 patent is currently undergoing reexamination in the United States Patent and Trademark Office ("PTO"). Additionally, the Federal Circuit is considering infringement issues with regard to the '267, '907, and '410 patents after the International Trade Commission ("ITC") rendered a non-infringement decision in favor of Unilin and against the plaintiffs.

Presently before the court is the defendant's motion to stay litigation of the '579 patent pending the completion of both the '621 reexamination proceedings and the Federal Circuit's decision on the '267, '907, and '410 patents. After consideration of each of the factors involved, and for the reasons detailed below, the court will grant the motion to stay.

II. BACKGROUND

The parties involved in the present action have attempted to resolve their patent infringement issues in many different forums, both in the United States and in Europe. Specifically, in July 2000, Pergo Inc. ("Pergo"), Unilin's licensee, brought a declaratory action in the District of Columbia with regard to the '267, '907, and '621 patents in response to the plaintiffs' threats of infringement litigation. Pergo additionally filed a request for reexamination of the '621 patent in the PTO. This reexamination is currently ongoing. The plaintiffs subsequently filed a complaint in the Eastern District of Wisconsin asserting that Pergo and Unilin infringed the '267 and '907 patents. In response, Unilin filed its own declaratory judgment action in the District of Columbia, alleging that its product did not infringe the '267, ' 907, and '621 patents.

In December 2000, the plaintiffs initiated a proceeding in the ITC asserting that Unilin infringed the '267, '907, and '410 patents. Upon the filing of the ITC action, all of the district court actions between the two parties concerning the alleged infringement of the '267, '907, and '410 patents were stayed pursuant to 28 U.S.C. § 1659. In November 2001, an ITC Administrative Law Judge ("ALJ") issued a decision finding that Unilin did not infringe the ' 267, '907, or '410 patents. The ITC affirmed the ALJ's decision in April 2002. The plaintiffs then appealed to the Federal Circuit, which heard oral argument on that case in March 2003. No decision has yet issued.

In the present case, the '579 patent is the only patent in dispute. However, as the court noted above, it is the latest of the continuation patents that stem from the original '621 patent. The '579 patent has never been reviewed by the PTO, the ITC, or any other court.

III. DISCUSSION

***2** The decision to stay a case is firmly within the discretion of the court. *See Cost Bros., Inc. v. Travelers Indem. Co.*, 760 F.2d 58, 60 (3d Cir.1985). This authority applies equally to patent cases in which a reexamination by the PTO has been requested. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1426-27 (Fed.Cir.1988) (noting that "[c]ourts have

inherent power to manage their dockets and stay proceedings, including the authority to order a stay pending conclusion of a PTO reexamination.") (internal citations omitted); *see also* *Emhart Indus. v. Sankyo Seiki Mfg.*, 3 U.S.P.Q .2d 1889, 1890 (N.D.Ill.1987) (recognizing that, "in passing legislation establishing the reexamination proceeding, Congress stated its approval of district courts liberally granting stays within their discretion."); *Gould v. Control Laser Corp.*, 705 F .2d 1340, 1342 (Fed.Cir.1983) (citing legislative history of reexamination statute).

In determining whether a stay is appropriate, courts are directed to consider the following factors: "(1) whether a stay would unduly prejudice or present a clear tactical disadvantage to the non-moving party; (2) whether a stay will simplify the issues in question and trial of the case; and (3) whether discovery is complete and whether a trial date has been set." *Xerox Corp. v. 3 Comm Corp.*, 69 F.Supp.2d 404, 406 (W.D.N.Y.1999) (citing cases); *cf.* *United Sweetner USA, Inc. v. Nutrasweet Co.*, 766 F.Supp. 212, 217 (D.Del.1991) (stating a similar test).

In opposition to the defendants' motion to stay, the plaintiffs first argue that, since the '579 patent itself is not at issue in the reexamination proceedings, or in the Federal Circuit appeal, there is no need to stay the case before this court. *See* D.I. 21 at 7. The court must disagree because the plaintiffs cannot credibly argue that the patents are not alike in subject matter, as well as in many of their claims. This is so because, in general, "a continuing application is one filed during the pendency of another application which contains at least part of the disclosure of the other application and names at least one inventor in common with that application." *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 555 (Fed.Cir.1994). Thus, a continuation application "claims the same invention claimed in an earlier application, although there may be some variation in the scope of the subject matter claimed." *Id.* Indeed, the plaintiffs themselves admit that the patents in question do have some terms in common. *See* D.I. 21 at 10. Therefore, even though the '579 patent does not contain precisely the same claims of the other patents that are under review or reexamination, there is a sufficient correlation among all of the patents for the court to conclude that a stay is appropriate.

Additionally, with regard to the issue of efficiency, it is beyond dispute that the court would benefit from a narrowing of the numerous complex issues relating to claims, which, if clearly defined, would streamline discovery and subsequent litigation. To this end, the reexamination of the '621 patent will greatly serve the purpose of defining the issues in this case. For example, the court will gain the benefit of the PTO's particular expertise in evaluating the prior art. *See* *Pegasus Development Corp. v. DirecTV, Inc.*, 2003 WL 21105073, *2 (D.Del. May 14, 2003) (citations omitted). Likewise, the court will also benefit from the reexamination process in that (1) many discovery issues relating to prior art may be alleviated; (2) the record of the reexamination likely would be entered at trial; (3) the issues, defenses, and evidence will be more easily limited in pre-trial conferences following a reexamination; and (4) the outcome of the reexamination process may encourage a settlement without further involvement of the court. *Id.* (citations omitted). Such a refinement of the issues will benefit both parties by reducing litigation costs. *See id.* This approach will also best conserve the court's scarce resources. *See id.* Similar benefits will likewise flow from the Federal Circuit's analysis of the '267, '907, and '410 patents.

***3** The plaintiffs alternatively contend that the motion is premature because the two proceedings that have a potential impact on this case may be decided well before this case reaches the claim interpretation stage. *See* D.I. 21 at 5. However, if the decisions of the PTO and Federal Circuit are imminent, as the plaintiffs suggest, a stay at this time would not unduly burden their case as the stay would then be of short duration.

Finally, the court notes that discovery in this case has not yet begun, nor has a discovery schedule been entered at this time. Likewise, the court has not yet set a trial date. Therefore, the stay will be entered before any party incurs substantial litigation-related expenses.

IV. CONCLUSION

In light of the above considerations, the court concludes that a stay at this point in the case would not unduly prejudice the plaintiffs or create for them a clear tactical disadvantage. Indeed, a stay will allow the issues before the court to be further simplified and defined to the benefit of the parties, as well as the court.

For the foregoing reasons, IT IS HEREBY ORDERED that:

1. The Defendants' Motion to Stay Pending the Reexamination by the U.S. Patent and Trademark Office and Ruling by the United States Court of

Appeals for the Federal Circuit (D.I.15) is GRANTED.

2. The parties shall advise the court of any decision that results from the PTO's reexamination of the '621 patent and any decision that results from the Federal Circuit's consideration of the '267, '907, and '410 patents within thirty (30) days of the date of each decision.

3. The Plaintiffs' Motion to Strike Portions of the Answer and Complaint (D.I.11) is DISMISSED, without prejudice, and with leave to re-file should it become necessary following the stay.

Not Reported in F.Supp.2d, 2003 WL 21640372 (D.Del.)

END OF DOCUMENT

EXHIBIT F

Not Reported in F.Supp.2d
Not Reported in F.Supp.2d, 2005 WL 1126750 (N.D.Ohio)
(Cite as: 2005 WL 1126750 (N.D.Ohio))

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Only the Westlaw citation is currently available.

United States District Court,
N.D. Ohio, Eastern Division.
FLEXSYS AMERICAS, LP Plaintiff,
v.
KUMHO TIRE, U.S.A., INC., et al., Defendants.
No. 5:05CV156.

April 29, 2005.

Amanda M. Leffler, John C. Fairweather, Lisa S. Delgrosso, David C. Minc, Akron, OH, Carolyn E. Miller, Neil A. Benchell, Eric C. Cohen, Chicago, IL, for Plaintiff.

Alisa L. Wright, Ronald S. Kopp, Philip R. Wiese, Akron, OH, Darin J. Glasser, Newport Beach, CA, Diane K. Wong, John C. Kappos, Irvine, CA, Mark A. Samuels, Ryan K. Yagura, Vision L. Winter, Los Angeles, CA, Robert B. Casarona, Deborah A. Coleman, Cleveland, OH, for Defendants.

Memorandum of Opinion and Order

GAUGHAN, J.

INTRODUCTION

***1** This matter is before the Court upon Kumho Tire U.S.A., Inc., Kumho Tire Co., Inc. and Korea Kumho Petrochemical Co., Ltd.'s Motion to Stay (Doc. 18). Sovereign Chemical Company filed notice of Joinder in Kumho Defendants' Motion to Stay. Also before the Court is Sinorgchem's Motion to Stay (Doc. 20). This is an action for patent infringement. For the reasons that follow, the motions are GRANTED.

FACTS

Plaintiff, Flexsys Americas LP, filed this patent infringement action against defendants, Kumho Tire, U.S.A, Inc. (hereafter "Kumho USA"), Kumho Tire Co., Inc. (hereafter "Kumho Korea"), Korea Kumho Petrochemical Co., Ltd. (hereafter "KKPC"), Sovereign Chemical Company (hereafter "Sovereign") and Sinorgchem Co. (hereafter "Sinorgchem").

According to the complaint, plaintiff is the beneficial owner of U.S. Patent No. 5,117,063 ('063 Patent), U.S. Patent No. 5,608,111 ('111 Patent), U.S. Patent No. 5,453,541 ('541 Patent) and 6,140,538 ('538 Patent). These patents cover certain processes for making the chemical compound 4-ADPA and its alkylated derivatives, including 6PPD. (Compl.¶ 1). These compounds are contained in nearly every tire sold in the United States. (Comp.¶ 2).

Plaintiff alleges that each defendant infringes its patents, albeit in different contexts. According to plaintiff, Sinorgchem actually manufactures 4-ADPA and 6PPD by utilizing the processes covered by plaintiff's patents. (Compl.¶ 9). Plaintiff further alleges that, in concert with Sinorgchem, defendant KKPC purchases 4-ADPA from Sinorgchem and alkylates the compound into 6PPD. (Compl.¶ 23). Kumho Korea and Kumho USA do not manufacture either compound but, instead, import tires into the United States that contain 6PPD. (Compl.¶ ¶ 32, 39). Sovereign Chemical is alleged to have infringed plaintiff's patents by importing 6PPD made by a process covered by one or more of the patents at issue.

Shortly after plaintiff filed this lawsuit, it filed a complaint with the United States International Trade Commission (hereafter "ITC") against, among others, Sinorgchem, KKPC and Sovereign Chemical. Plaintiff, however, did not name Kumho USA or Kumho Korea as defendants in the ITC action. The ITC complaint asserts patent infringement claims with respect to three of the four patents at issue in this lawsuit. The only patent not subject to the ITC action is the '541 patent. On March 23, 2005, the ITC instituted a formal investigation into plaintiff's allegations. All defendants now seek a stay of this action pending the conclusion of the ITC proceedings. Plaintiff opposes defendants' motions.

ANALYSIS

As an initial matter, Sinorgchem, Sovereign Chemical and KKPC argue that they are entitled to a mandatory stay pursuant to 28 U.S.C. § 1659(a) with respect to the '063 Patent, the '111 Patent and the '538 Patent, which are the three patents at issue in the ITC investigation. Section 1659(a) provides, in relevant part,

> In a civil action involving parties that are also parties to a proceeding before the United States

> International Trade Commission ... at the request of a party that is also a respondent in the proceeding before the Commission, the district court *shall* stay, until the determination of the Commission becomes final, proceedings in the civil action with respect to any claim that involves the same issues involved in the proceeding before the Commission....

*2 28 U.S.C. § 1659(a) (emphasis added).

Plaintiff does not dispute that these defendants are entitled to a stay. Based on the mandatory nature of the stay provision, the Court hereby stays this action as to Sinorgchem, Sovereign Chemical and KKPC with regard to the '063 Patent, the '111 Patent and the '538 Patent.

Sinorgchem, Sovereign Chemical and KKPC also ask this Court to invoke its discretionary power to stay plaintiff's claim of infringement vis à vis the '541 Patent. According to these defendants, adjudication of this patent will involve the same facts and issues facing the ITC with respect to two of the three patents before it. According to defendants, the '541 Patent is a member of the same patent family as the '063 and '111 patents. Defendants argue that nearly all of the important claim terms found in the '541 Patent will necessarily be construed by the ITC because those terms also appear in either the '063 Patent of the '111 Patent. As a result, defendants claim that resolution of plaintiff's claims with respect to the '541 Patent will involve the same claim construction, validity, infringement and inventorship issues. In addition, the witnesses and discovery necessary to analyze this patent will overlap extensively with the discovery that will be conducted before the ITC.

According to plaintiff, a stay of this case is not warranted with respect to the '541 Patent. Plaintiff points out that it does not intend to duplicate any discovery that will be conducted before the ITC and further indicates that the discovery taken in the ITC action will be fully available for use in this case. In addition, plaintiff argues that this Court's resources will not be wasted because the Court will not be required to make any substantive rulings until after the ITC's decision is issued. Moreover, any claims construction or other rulings made by the ITC are not res judicata and, as such, this Court will be required to engage in its own analysis on these issues. According to plaintiff, by permitting discovery into the '541 Patent to proceed simultaneously with the ITC action, this case can be resolved shortly after the ITC concludes its investigation. As such, this case will be concluded within the 24-month period set for complex cases. Plaintiff further points out that the scope of the two proceedings is different in that the ITC cannot award damages or issue an injunction to the same extent as an Article III court.

Upon review of the parties arguments, as well as the relevant law, the Court finds defendants' argument to be well taken. It is well settled that this Court possesses the power to grant a discretionary stay if the circumstances warrant. *Landis v. North American Co.*, 299 U.S. 248, 57 S.Ct. 163, 81 L.Ed. 153 (1936). "... [T]he power to stay proceedings is incidental to the power inherent in every court to control the disposition of the causes on its docket with economy of time and effort for itself, for counsel, and for litigants." *Id.* at 254. "A district court has discretion to determine whether a stay is necessary to avoid piecemeal, duplicative litigation and potentially conflicting results." *International Brotherhood of Electrical Workers, Local Unio No.2020 v. AT & T Network Systs.*, unreported, 879 F.2d 864 (6th Cir. July 17, 1989). "[T]he burden is on the party seeking the stay to show ... [a] pressing need for delay, and that neither the other party nor the public will suffer harm from entry of the order." *Ohio Envtl. Council v. United States Dist. Ct., Southern Dist. of Ohio*, 565 F.2d 393, 396 (6th Cir.1977).

*3 Although no court in the Sixth Circuit has addressed the precise issues presented by defendants' motion, the Court finds *Alloc, Inc. v. Unilin Decor N.V.*, 2003 WL 21640372 (D.Del. July 11, 2003) instructive. In *Alloc,* plaintiff filed a patent infringement action with respect to one patent, which was the latest in a series of continuation patents. The earlier patents were the subject of an ITC investigation. Plaintiff argued that a stay was inappropriate because the specific patent at issue in the lawsuit was not before the ITC. The court rejected plaintiff's argument, noting that, by nature, continuation patents overlap considerably with each other. Specifically, the court noted,

> ... [P]laintiffs cannot credibly argue that the patents are not alike in subject matter, as well as in many of their claims. This is so because, in general, 'a continuing application is one filed during the pendency of another application which contains at least part of the disclosure of the other application and names at least one inventor in common with that application.' Therefore, even though the [patent at issue in the lawsuit] does not contain precisely the claims of the other patents that are under review or reexamination, there is a sufficient correlation among all of the patents for the court to

conclude that a stay is appropriate.
Id. at *2 (citations omitted).

The court further noted that it would benefit greatly from the narrowing of complex issues related to the claims. In addition, the court relied on the fact that the parties had not yet incurred substantial litigation expenses. [FN1]

> FN1. Plaintiff attempts to distinguish *Alloc* on the basis that one of the patents at issue was subject to a reexamination proceeding before the Patent Office and the ITC ruling was pending before the Federal Circuit Court of Appeals. In addition, unlike the instant action, the lawsuit in *Alloc* was filed after the ITC proceeding was instituted. The Court does not believe that these minor differences affect the persuasiveness of *Alloc*. Nor is this Court compelled to follow *Mircon Tech., Inc. v. Mosel Vitelic Corp.*, 1999 WL 458168 (D.Idaho March 31, 1999), the case primarily relied on by plaintiff.

Like the Court in *Alloc,* this Court finds that Sinorgchem, Sovereign Chemical and KKPC are entitled to a stay of the proceedings with regard to the '541 Patent. The '541 Patent is part of a series of continuation patents, which includes both the '063 Patent and the '111 Patent. As defendants point out, many of the claims contained in the '541 Patent that will require construction in this case are present in either the '063 or '011 patent. As part of its investigation, the ITC will make rulings concerning claims construction, invalidity and relevant prior art. This Court recognizes that it is not bound by the rulings made by the ITC. As in *Alloc,* however, the Court finds that it would benefit tremendously from a narrowing of the complex issues in this case. It is more than likely that after the ITC ruling, the parties in this case will have fewer issues for this Court to resolve.

Moreover, the Court finds that plaintiff will not be prejudiced by a stay of this case. It is entirely unclear to this Court why plaintiff would opt to pursue only two of the three continuation patents before the ITC, other than in an attempt to avoid the mandatory stay requirements of 28 U.S.C. § 1659(a). Plaintiff indicates in its brief in opposition that it will be harmed by a stay of this action because the damages portion of the trial will be delayed while defendants continue to infringe the patents and because "delay always results in increased costs." The Court is not convinced of the gravity of plaintiff's alleged prejudice. On the other hand, the Court finds that requiring defendants to litigate both this case and the ITC action at the same time will result in prejudice. As set forth above, the majority of this case against these defendants is subject to a statutory stay. In the event this Court were to allow the case to proceed only with respect to the '541 Patent, this case would essentially be relitigated after the lifting of the mandatory stay. Much of the discovery related to this patent will overlap with that required to litigate the other patents at issue. Thus, two rounds of discovery would ensue absent a stay. [FN2] Although plaintiff indicates that it will not seek additional discovery, the same cannot be said of all of the parties in this case. Certainly, as set forth more fully below, Kumho USA and Kumho Korea will seek discovery as to the patents at issue before the ITC. Because plaintiff did not name them as defendants in the ITC proceeding, they will be unable to participate in discovery until after this Court lifts the automatic stay. In addition to compounding the written discovery, this would result in redeposing many witnesses [FN3] and requiring the parties to appear for at least twice as many hearings and conferences. Given that two of these defendants are located in Asia, the Court finds that requiring this case to proceed only with respect to the '541 Patent would create an undue burden on defendants.

> FN2. Even accepting as true plaintiff's statement that no discovery will be duplicated, the Court finds that imposition of a discretionary stay will not cause plaintiff undue hardship. The '541 Patent is a member of the same patent family as the '063 and the '111 patents and the Court cannot imagine that a great deal of additional discovery will be necessary to analyze the '541 Patent after the ITC ruling is issued. Thus, if plaintiff is correct, and no party seeks discovery in regards to the patents at issue before the ITC, only a minimal delay will occur in this action.

> FN3. For example, in a continuation patent there is at least one inventor in common with the prior application. Because of the statutory stay, this individual could not be questioned with regard to either the '063 Patent or the '111 Patent until after the stay is lifted. If this Court allowed the case to proceed only as to the '541 Patent, this individual would be required to appear at least twice for depositions. The Court

presumes other witnesses would face a similar fate.

*4 In addition, the Court finds that a temporary stay will result in a tremendous savings of judicial time and resources. Absent a stay, the Court will hold status conferences and hearings and address discovery disputes only to be faced with many of these same issues after the stay is lifted. In all, the Court finds that the balance of interests weighs in favor of granting a stay with regard to the '541 Patent.

For these same reasons, the Court finds that a stay with regard to Kumho USA and Kumho Korea is also warranted. Although these defendants are not parties to the ITC action, the Court finds that allowing this case to proceed against only these defendants makes little sense. As these defendants point out, they are not primary infringers. Rather, plaintiff alleges that Kumho USA and Kumho Korea import tires containing products that were manufactured by other defendants who used an infringing process. Having concluded that a stay of this matter is appropriate as to the primary infringer(s), the Court finds that requiring Kumho USA and Kumho Korea to defend this action absent the primary infringer(s) would result in unfair prejudice to defendants. Once the stay is lifted, all of the issues will be relitigated. Perhaps even more important, it would be impossible for this Court to resolve the patent infringement claims filed against these defendants absent the primary infringer(s) because the patents at issue are process patents. Kumho USA and Kumho Korea are not alleged to infringe the patent by employing the covered processes themselves. Rather, they import tires allegedly containing materials other defendants manufacture in violation of the patents. As such, in order to determine whether Kumho USA and Kumho Korea are liable in this case, it is necessary to discover the process employed by the primary infringer(s) in creating the 6PPD contained in the tires they import. It will be impossible, however, for these defendants to obtain the discovery necessary to defend themselves against the majority of the claims asserted by plaintiff until after the mandatory stay is lifted. [FN4] For this reason, and those stated above, the Court finds that a stay is warranted as to Kumho USA and Kumho Korea.

FN4. The Court rejects plaintiff's suggestion that these parties would not require additional discovery because they have the same attorneys as KKPC. For obvious reasons, this Court could not preclude Kumho USA and Kumho Korea from seeking additional discovery upon the lifting of the mandatory stay.

CONCLUSION

For the foregoing reasons, Kumho Tire U.S.A., Inc., Kumho Tire Co., Inc. and Korea Kumho Petrochemical Co., Ltd.'s Motion to Stay are GRANTED. In addition, Sinorgchem's Motion to Stay is GRANTED. This case is hereby perpetually stayed. Upon the conclusion of the ITC proceeding, any party may move to reopen this case.

IT IS SO ORDERED.

Not Reported in F.Supp.2d, 2005 WL 1126750 (N.D.Ohio)

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